24-month Chronic and Carcinogenic Inhalation Toxicological Study of Methanol in Fischer Rats

(Vol. 8)

Individual Major Pathological Findings (Female) Individual Pathological Findings (Female)

September 30, 1985

Mitsubishi Chemical Safety Institute, Ltd.

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

ANIMAL NUMBER 1001	1)	ć					
NUMBER 1001	ם א ד ה	(7)	800Y W	WEIGHT (ر و	PROBABLE CAUSE OF DEATH	REFFERENCE
1001	- 1 - 1 - 1		INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
	>-	740	0.96	306.1	210.1	NO SIGNIFICANT LESION	11-F1-1001
1002	>	740	93.1	303.0	209.9	ADENOMA: PITUITARY GLAND POLYP: UTERUS ADENOCARCINOMA: CLITORAL GLAND	11-F1-1002
1003	>	740	2.79	341.4	244.1	PAPILLARY ADENOMA: LUNG ADENOMA: PITUITARY GLAND SQAMOUS CELL PAPILLOMA : SKIN C-CELL ADENOMA: THYROID GLANDS	11-F1-1003
1004	3	616	98.1	221.6	123.5	ADENOMA: PITUITARY GLAND	11-F1-1004
1005	3	691	105.9	220.1	114.2	ADENOCARCINOMA: CLITORAL GLAND ADENOMA: PITUITARY GLAND	11-F1-100S
1006	3	616	102.7	234.1	131.4	ADENOMA: PITUITARY GLAND	11-F1-1006
1007	×	296	100.6	194.6	0.76	NO SIGNIFICANT LESION	11-F1-1007
1008	>-	740	106.4	333.2	226.8	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY : KIDNEYS ADENOMA: PITUITARY GLAND	11-F1-1008
1009	>	072	103.9	277.6	173.7	ADENOMA: PITUITARY GLAND	11-F1-1009

APPENDIX 10-F1-25

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

. INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

FEMALE
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	1) FATE	2) DAYS	4 YOOB	WEIGHT (° 9	CAUSE OF DEATH	REFERENCE
NUMBER			INITIAL	FINAL	GAIN	OR MAJOR PATHOLOGICAL FINDINGS	NON
1010	>-	072	105.0	381.3	276.3	POLYP: UTERUS C-CELL ADENOMA: THYROID	1010
1011	×	711	99.2	362.2	263.0	ASTROCYTOMA: BRAIN	11-11-11-11-11-11-11-11-11-11-11-11-11-
1012	×	329	102.9	172.4	69.5	KERATOACANTHOMA: STOMACH KERATOACANTHOMA: TONGUE INTERSTITIAL NEPHRITIS : KIDNEYS	11-F1-1012
1013	>-	240	98.5	284.9	186.4	ISLET-CELL ADENOMA : PANCREAS	11-F1-1013
1014	3	651	103.0	222.6	119.6	SQUAMOUS CELL CARCINOMA : TONGUE	11-F1-1014
1015	3	242	100.8	291.8	191.0	ADENOMA: PITUITARY GLAND	11-F1-1015
1016	>-	240	101.4	310.0	208.6	PAPILLARY ADENOMA: LUNG C-CELL ADENOMA: THYROID GLANDS	11-F1-1016
1017	×	646	92.4	296.7	204.3	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1017
1018	>	240	0.86	317.5	219.5	POLYP: UTERUS	11-61-1018
1019	>-	741	100.0	275.0	175.0	NO SIGNIFICANT LESION	11-F1-1019
1020	> -	741	100.8	367.0	266.2	NO SIGNIFICANT LESION	11-F1-1020

APPENDIX 10-F1-26

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	1		1 1 1								
STUDY NO. 83004	REFFERENCE	(APPENDIX NUMBER)	11-F1-1021	11-F1-1022	11-F1-1023	11-F1-1024	11-F1-1025	11-F1-1026	11-F1-1027	11-F1-1028	11-F1-1029
	PROBABLE CAUSE OF DEATH	OR MAJOR PATHOLOGIČAL FINDINGS	NO SIGNIFICANT LESION	FIBROADENOMA: MAMMARY GLAND	FIBROADENOMA: MAMMARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	ADENOMA: PITUITARY GLAND C-CELL ADENOMA: THYROID GLANDS ADENOCARCINOMA: UTERUS	ADENOMA: PITUITARY GLAND	C-CELL ADENOMA: THYROID GLANDS	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS MEDULLOBLASTOMA: BRAIN	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS	ADENOMA: PITUITARY GLAND GRANULOSA-THECA CELL TUMOR: OVARIES
	9	GAIN	237.7	218.1	219.3	201.4	227.3	254.4	215.9	. 194.8	239.4
	WEIGHT (FINAL	333.7	318.3	315.2	294.5	330.5	348.3	304.5	299.1	338.2
	3 BOD 4	TIAL	96.0	100.2	6.56	93.1	103.2	93.9	88.6	.104.3	98.8
	2)	1 2 1 3 1 1 1 1 1 1	741	741	741	741	741	741	645	687	741
: : : : : : : : : : : : : : : : : : :	1) FATE		>-	>	>-	>-	>-	>-	3	3	>-
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ANIMAL	NUMBER	1021	1022	1023	1024	1025	1026	1027	1028	1029
:											

1) FATE: Y KILLED ON SCHEDULE; W KILLED IN EXTREMIS
2) DAYS: AFTER START OF TREATMENT.

APPENDIX 10-F1-27

CHRONIC AND CARCINDGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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	1	!		1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.8
ANIMAL	1) FATE	2) DAYS	1 Y008 .	WEIGHT (SE OF DEATH	REFFERENCE
NUMBER			. !	!	GAIN	OR MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1030	>-	272	105.9	369.2	263.3		11-F1-1030
7 2 7	:					ADENOMA: PITUITARY GLAND	
1001	>-	742	7.96	315.7	219.3	C-CELL ADENOMA: THYROID	11-F1-1031
						FOLLICULAR ADENOMA : THYROID GLANDS	
1032	>-	742	93.9	290.2	196.3	NO SIGNIFICANT LESION	11-F1-1032
1033	3	715	6.56	293.6	197.7	C-CELL ADENOMA: THYROID	11-F1-1033
						GLANDS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	
1034	>	742	105.5	371.6	266.1	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1034
1035	>-	742	95.4	280.1	184.7	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1035
1036	3	769	98.9	275.9	177.0	POLYP: UTERUS SQUAMOUS CELL CARCINOMA : TONGUE	11-F1-1036
1037	>	721	7.96	270.1	173.4	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1037
1038	>-	742	97.8	292.6	194.8	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1038

1) FATE: Y X KILLED ON SCHEDULE: W X KILLED IN EXTREMIS.

W , KILLED IN EXTREMIS

Y , KILLED ON SCHEDULE ; X , FOUND DEAD ; AFTER START OF TREATMENT.

1) FATE: 2) DAYS:

APPENDIX 10-F1-28

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL	1) FATE	2>	4 Y008	WEIGHT (6)	PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER			IAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1039	>-	742	99.2	336.8	237.6	FIBROADENOMA: MAMMARY GLAND	11-F1-1039
1040	>-	243	6.79	343.8	245.9	NO SIGNIFICANT LESION	11-F1-1040
1041	×	687	96.2	325.5	229.3	PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F1-1041
1042	÷	743	5.66	324.9	225.4	POLYP: UTERUS FIBROADENOMA: MAMMARY GLAND C-CELL ADENOMA: THYROID GLANDS ASTROCYTOMA: BRAIN	11-F1-1042
1043	3	708	101.1	289.4	188.3	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1043
. 1044	×	636	9.66	307.2	207.6	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND	11-F1-1044
1045	3	572	100.5	317.7	217.2	MESOTHELIOMA: PERITONEUM ADENOMA: PITUITARY GLAND	11-F1-1045
1046	>-	743	95.2	321.0	225.8	ADENOMA: PITUITARY GLAND	11-F1-1046
1047	>-	743	109.2	356.7	247.5	ADENOMA: UTERUS	11-F1-1047
1048	>	743	102.5	321.2	218.7	NO SIGNIFICANT LESION	11-F1-1048

APPENDIX 10-F1-29

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

FEMALE

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LEVEL AND SEX :

ANIMAL	1)	25	BODY W	WEIGHT (G)	° 5	PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER		DATS	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1049	3	686	97.2	198.8	101.6	HISTIOCYTOSIS: MULTIPLE ORGANS	11-F1-1049
1050	3	667	102.0	296.4	194.4	BASAL CELL TUMOR: SKIN MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1050
1051	3	733	96.1	258.6	162.5	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: MAMMARY GLAND	11-F1-1051
1052	> -	743	7.66	327.9	228.2	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F1-1052

W > KILLED IN EXTREMIS; Y > KILLED ON SCHEDULE.

AFTER START OF TREATMENT.

1) FATE : 2) DAYS :

10-F2-30 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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NUMBER		! ! !	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1101	>-	240	91.8	227.8	136.0		
1102	>-	072	94.5	322.8	228.3		11-F2-1102
1103	>-	240	102.1	371.8	269.7		11-F2-1103
1104	>-	240	88.7	340.4	251.7		11-F2-1104
1105	3	722	103.4	262.5	159.1	ADENOMA: PITUITARY GLAND	11-F2-1105
1106	>-	240	95.4	334.3	238.9		11-F2-1106
1107	>	072	0.76	352.8	258.8		11-F2-1107
1108	>-	240	102.8	385.2	282.4		11-F2-1108
1109	>	240	102.8	485.1	382.3		11-F2-1109
1110	×	686	97.1	332.3	235.2	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1110
1111	>	240	99.1	338.8	239.7		11-F2-1111
1112	3	550	102.3	252.7	150.4	ADENOMA: PITUITARY GLAND	11-F2-1112
1113	>-	741	98.6	321.2	222.6		11-F2-1113
1114	>-	741	98.7	310.5	211.8		11-F2-1114
1115	>	741	9.96	390.4	293.8		11-F2-1115

APPENDIX 10-F2-31

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

FATE	(2)	ВОВУ	WEIGHT (0 0	PROBABLE CAUSE OF DEATH	REFFERENCE
	DAYS	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
 	741	100.1	379.4	279.3		11-F2-1116
>-	741	0.66	356.6	257.6		11-F2-1117
>-	741	7.96	280.8	184.1		11-F2-1118
3	561	98.1	282.8	184.7	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1119
3	659	. 95.4	264.4	169.0	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND POLYP: UTERUS ADENOMA: PITUITARY GLAND	11-F2-1120
3	687	94.6	498.2	403.6	ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND	11-F2-1121
3	929	97.3	267.7	170.4	ADENOCARCINOMA: CLITORAL GLAND ADENOCARCINOMA: KIDNEYS	11-F2-1122
> -	741	91.2	328.3	237.1		11-F2-1123
3	735	100.3	328.3	228.0	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND	11-F2-1124
> -	741	98.8	270.5	171.7		11-F2-1125

1) FATE: Y KILLED ON SCHEDULE; W KILLED IN EXTREMIS.
2) DAYS: AFTER START OF TREATMENT.

10-F2-32 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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ANIMAL	1)	2)	W YOOB	WEIGHT (6 9		FFER
NUMBER		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NITIAL	FI	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1126	> -	741	100.1	367.2	267.1		- F 2
1127	3	638	60.7	282.1	191.4	ASTROCYTOMA: BRAIN	11-F2-1127
1128	>	742	93.1	316.9	223.8		11-F2-1128
1129	>	629	91.6	256.2	164.6	ADENOMA: PITUITARY GLAND	11-F2-1129
1130	×	769	98.2	330.7	232.5	MONDNUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1130
1131	>	272	93.5	367.2	273.7		11-F2-1131
1132	>	242	101.6	361.7	260.1		11-F2-1132
1133	>	272	93.5	359.3	265.8		11-F2-1133
1134	3	089	92.6	225.1	132.5	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND GRANULAR MYOBLASTOMA : UTERUS	11-F2-1134
1135	>	742	9.66	364.7	265.1		11-F2-1135
1136	>	742	88.4	319.3	230.9		11-F2-1136
1137	>	713	97.2	280.7	183.5	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1137
1138	>-	742	90.1	336.4	246.3		11-F2-1138
1) FATE:	Y XILLED O	Y X KILLED ON SCHEDULE ;	W XILLED	N	EXTREMIS ;	x , FOUND DEAD .	
) DAYS :	AFTER START	OF TREATMENT.					

APPENDIX 10-F2-33

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

FEMALE
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		SCHEDULE.	LED ON SCH	Y , KILLE	W . KILLED IN EXTREMIS ;	W KILLED	FATE :
11-F2-1152	ADENOMA: PITUITARY GLAND	159.0	261.7	102.7	729	Α	1152
11-F2-1151		239.9	340.9	101.0	743	>-	1151
11-F2-1150	ADENOMA: PITUITARY GLAND	143.9	236.6	92.7	631	Μ	1150
11-F2-1149		184.9	275.2	90.3	243	>-	1149
11-F2-1148		243.4	340.3	6.96	743	>-	1148
11-F2-1147	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	155.4	254.2	98.8	629	3	1147
11-F2-1146		265.0	359.6	9.46	743	>-	1146
11-F2-1145		244.6	339.7	95.1	243	>-	1145
11-F2-1144		231.1	324.9	93.8	743	>-	1144
11-F2-1143		239.5	341.3	101.8	243	>-	1143
11-F2-1142		242.7	335.3	92.6	742	>-	1142
11-F2-1141	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	178.0	279.5	101.5	999	3	1141
11-F2-1140	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS PAPILLARY ADENOMA : THYROID GLANDS	174.2	270.8	96.6	721	3	1140
11-F2-1139	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	176.8	273.8	97.0		3	1139
(APPENDIX NUMBER)	MAJOR PATHOLOGICAL FINDINGS	AIN	FINAL	HIN	! ! ! !	- 1	NUMBER
REFFERENCE	PROBABLE CAUSE OF DEATH		WEIGHT (W YOOR	2)	1)	ANIMAL

APPENDIX 10-F2-34

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX: 10 PPM FEM

STUDY NO. 83004	REFFERENCE		(CONTINUED) 1152 W 729 102.7 261.7 159.0 CALCULOSIS: URINARY BLADDER
	PROB	MAJOR PATHOLOGICAL FINDINGS	CALCULOSIS: URINARY BLADDER
		I Z	261.7 159.0
1	BODY WEIGHT (G)		261.7
	BODY	INITIAL	102.7
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	729
1 1 1 1 1 1 1	1)	ш - - -	ED) W
	ANIMAL	NUMBER	(CONTINUED) 1152 W 729 102.7

2) FATE: W * KILLED IN EXTREMIS.
2) DAYS: AFTER START OF TREATMENT.

APPENDIX 10-F3-35

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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NUMBER	7.7	7	> < < < < < < < < < < < < < < < < < < <	\	,		
NUMBER	FATE	DAYS	1		`	PROBABLE CAUSE OF DEATH	REFFERENCE
! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	INITIAL	FINAL	Z	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1201	> -	240	98.1	331.3	233.2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1202	3	657	100.0	265.7	165.7	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1202
1203	>-	240	7.76	316.5	222.1		7001-23-11
1204	×	630	93.1	241.1	148.0	ADENOMA: PITUITARY GLAND	11-53-1203
1205	>-	240	102.9	379.4	276.5		11-53-1204
1206	>-	240	6.96	361.1	264.2		11-F3-1206
1207	3	. 999	104.8	292.2	187.4	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS C-CELL ADENOMA: THYROID GLANDS	11-F3-1207
1208	>	740	93.1	314.5	221.4		11-F3-1208
1209	3	658	100.5	266.1	165.6	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1209
						ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND	,
1210	>-	072	95.4	338.9	243.5		11-F3-1210
1211	>-	240	106.1	350.3	244.2		11-F3-1211

APPENDIX 10-F3-36

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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NUMBER	FATE	DAYS	INITIAL	FINAL	GAIN	OR MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1212	3	617	100.3	224.4	124.1	PAPILLARY ADENOMA : MAMMARY GLAND MESENCHYMOMA: KIDNEYS ADENOMA: PITUITARY GLAND ISLET-CELL ADENOMA : PANCREAS	11-F3-1212
1213	>-	240	92.3	329.7	237.4		11-F3-1213
1214	>-	072	81.9	317.5	235.6		11-F3-1214
1215	3	427	8.16	201.3	106.5	ADENOCARCINOMA: PITUITARY GLAND	11-F3-1215
1216	>-	741	92.7	290.5	197.8		11-F3-1216
1217	>-	741	95.6	313.8	221.2		11-F3-1217
1218	3	728	93.4	256.0	162.6	C-CELL CARCINOMA: THYROID GLANDS	11-F3-1218
		•				ADENUMA: PILUITARY GLAND	
						FIBROADENOMA: MAMMARY GLAND	
1219	>	741	98.5	320.9	222.4		11-F3-1219
1220	>-	741	94.1	296.3	202.2		11-F3-1220
1221	3	260	7.56	247.5	152.1	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	. 11-F3-1221
1222	>-	741	97.8	319.4	221.6		11-F3-1222

APPENDIX 10-F3-37

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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LEVEL

,	ON SCHEDULE	Y / KILLED	DEAD ;	X , FOUND	W , KILLED IN EXTREMIS ; AFTER START OF TREATMENT.	W / KILLED AFTER START	1) FATE : 2) DAYS :
11-F3-1229		238.0	344.3	106.3	741	>-	1229
11-F3-1228		228.8	333.3	104.5	741	>-	1228
11-F3-1227	MEDULLOBLASTOMA: BRAIN ADENOMA: PITUITARY GLAND	145.5	241.3	95.8	. 525	3	1227
. 11-F3-1226	PHEOCHROMOCYTOMA: ADRENAL GLANDS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY : KIDNEYS ULCER: STOMACH FIBROADENOMA: MAMMARY	199.5	302.4	102.9	732	€	1226
11-F3-1225	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND ENDOMETRIAL STROMAL SARCOMA: UTERUS	191.7	285.6	93.9	718	3	1225
11-F3-1224	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS	160.0	254.7	2.76	714	×	1224
11-F3-1223	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS C-CELL ADENOMA: THYROID GLANDS	145.6	239.1	93.5	720	3	1223
(APPENDIX NUMBER)	OR OLOGICAL F	GAIN	FINAL	1 1	DAYS	FATE	NUMBER
STUDY NO. 83004			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				

10-F3-38 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

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100 PPM

LEVEL AND SEX :

FEMALE

ANIMAL	1)	2)	W Y008	WEIGHT (6)	PROBABLE CAUSE OF DEATH	REFERENCE
	U F < U	0>					
NUMBER	T	DA 1 3	INITIAL	FINAL	GAIN	DR MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1230	3	. 209	92.6	220.9	128.3	MALIGNANT FIBROUS HISTIO- CYTOMA: PERITONEUM	11-F3-1230
1231	>-	741	0.46	339.8	245.8		11-F3-1231
1232	>-	741	0.	322.6	222.7		11-F3-1232
1233	×	546	5.56	246.6	153.1	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1233
1234	> -	742	6.46	382.5	287.6		11-F3-1234
1235	3	999	88.9	264.1	175.2	ADENOCARCINOMA: CLITORAL GLAND	11-F3-1235
1236	3	727	100.6	283.0	182.4	PYOGENIC STOMATITS : ORAL CAVITY	11-F3-1236
1237	>-	742	92.9	315.2	222.3		11-F3-1237
1238	>	742	94.2	225.3	131.1		11-F3-1238
1239	>	742	101.2	364.9	263.7		11-F3-1239
1240	>	272	93.5	331.0	237.5		11-F3-1240
1241	×	729	101.5	289.5	188.0	LEIOMYOSARCOMA: UTERUS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1241
1242	>	272	95.3	344.3	249.0		11-F3-1242
1243	×	662	91.3	312.0	220.7	HEMANGIOMA: UTERUS	11-F3-1243

APPENDIX 10-F3-39

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

FEMAL	
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SEX :	
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							STUDY NO. 83004
ANIMAL	1)	2)	B0DY W	WEIGHT (6 0	PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER		0 1 1	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1244	3	609	102.0	248.5	146.5	SQUAMOUS CELL CARCINOMA : SKIN	11-E3-1244
1245	>-	742	94.2	291.9	197.7		11-F3-1245
1246	>	743	99.2	345.0	245.8		11-F3-1246
1247	> -	743	94.3	321.6	227.3		11-F3-1247
1248	>	743	101.3	388.5	287.2		11-F3-1248
1249	×	242	109.4	329.9	220.5	MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS	11-F3-1249
1250	> -	743	99.1	386.8	287.7		11-F3-1250
1251	>-	743	2.76	292.9	198.2		11-F3-1251
1252	>-	743	96.8	368.3	271.5		11-F3-1252
1) FATE: 2) DAYS:	W / KILLED IN EXTREMIS A FTER START OF TREATMEN	W XILLED IN EXTREMIS ; AFTER START OF TREATMENT.	, xILL	ED ON SCHI	ON SCHEDULE ;	X , FOUND DEAD .	

10-F4-40 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

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ANIMAL	1)	2)	800Y W	WEIGHT (g ،	PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER			INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1301	>-	240		329.4	235.2	NO SIGNIFICANT LESION	11-F4-1301
1302	×	621	0.46	302.6	208.6	SQUAMOUS CELL CARCINOMA : CLITORAL GLAND	11-F4-1302
1303	> -	240	100.7	326.1	225.4	NO SIGNIFICANT LESION	11-F4-1303
1304	>-	740	98.1	318.8	220.7	PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F4-1304
1305	3	0 6 9	8.666	211.5	111.7	ADENOCARCINOMA: CLITORAL GLAND MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND PAPILLARY ADENOMA: LUNG	11-F4-1305
1306	>	240	7.96	357.9	261.2	NO SIGNIFICANT LESION	11-F4-1306
1307	>	740	101.4	273.2	171.8	THYMOMA: THYMUS PHEOCHROMOCYTOMA: ADRENAL GLANDS C-CELL ADENOMA: THYROID GLANDS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1307
1308	3	722	102.2	409.8	307.6	zo	11-F4-1308
1) FATE: 2) DAYS:	Y XILLED O AFTER START	Y , KILLED ON SCHEDULE ; AFTER START OF TREATMENT.	X . FOUND	DEAD;	W XILLED	IN EXTREMIS .	

APPENDIX 10-F4-41

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· CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

ANIMAL	1)	2)	BODY	EIGHT (PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER	т. - -	-	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
(CONTINUED)	INUED)						
1308	3	722	102.2	8.607	307.6	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1308
1309	3	732	104.8	304.0	199.2	FIBROADENOMA: MAMMARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1309
1310	>-	740	6.66	354.1	254.2	FIBROADENOMA: MAMMARY GLAND	11-F4-1310
1311	3	671	92.7	305.6	212.9	FIBROADENOMA: MAMMARY GLAND ENDOMETRIAL STROMAL SARCOMA: UTERUS	11-F4-1311
1312	3	652	100.7	283.7	183.0	LIPOMA: SKIN (SUBCUTIS) MESENCHYMOMA: SKIN (SUBCUTIS) MESENCHYMOMA: PERITONEUM MESENCHYMOMA: VAGINA	11-F4-1312
1313	> -	240	94.2	319.6	225.4	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F4-1313
1314	>-	240	7.76	269.4	172.0	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1314
1315	×	719	7.86	307.1	208.4	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1315
1316	>-	240	88.3	275.8	187.5	POLYP: UTERUS	11-F4-1316
1) FATE: 2) DAYS:	W / KILLED IN E AFTER START OF	IN EXTREMIS ; OF TREATMENT.	Y , KILL	LED ON SCH	SCHEDULE ;	X , FOUND DEAD .	

APPENDIX 10-F4-42

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

	FEMALE
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!	AND
	LEVEL

ANIWAL	1)	2)	80DY W	WEIGHT (6)	PROBABLE CAUSE OF DEATH	REFERENCE
NUMBER	IJ ! - ! ¥ !	UATS	INITIAL FINA	FINAL	GAIN	OR MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1317	>-	741	0.86	285.6	192.6	POLYP: UTERUS	11-F4-1317
1318	3	632	105.5	345.2	239.7	ENDOMETRIAL STROMAL SARCOMA: UTERUS C-CELL ADENOMA: THYROID GLANDS	11-F4-1318
1319	Ν	735	102.1	256.8	154.7	MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND	11-F4-1319
1320	> -	741	91.4	310.2	218.8	NO SIGNIFICANT LESION	11-F4-1320
1321	> -	741	. 95.5	327.7	232.2	ADENOCARCINOMA: CLITORAL GLAND	11-F4-1321
1322	>	741	103.1	357.9	254.8	FIBROMA: SKIN (SUBCUTIS) ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1322
1323	>-	741	93.8	297.6	203.8	NO SIGNIFICANT LESION	11-F4-1323
1324	>-	741	93.1	325.6	232.5	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1324
1325	3	683	89.0	243.5	154.5	ADENOMA: MAMMARY GLAND RHABDOMYOSARCOMA : MISCIF (O FFMORIS)	11-F4-1325

1) FATE: Y, KILLED ON SCHEDULE; W, KILLED IN EXTREMIS 2) DAYS: AFTER START OF TREATMENT.

APPENDIX 10-F4-43

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

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INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

				1 1 1 1 1	1 1 1 1 1		STUDY NO. 83004
ANIMAL	1)	(2) (2)	80DY W	EIGHT (^ 5	PROBABLE CAUSE OF DEATH	REFERENCE
NUM BER		0	INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1326	>-	741	91.1	М	217.3	ADENOCARCINOMA: CLITORAL GLAND ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1326
1327	>	741	91.2	328.1	236.9	ADENOCARCINOMA: CLITORAL GLAND POLYP: UTERUS	11-F4-1327
1328	В	736	91.3	289.4	198.1	ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND	11-F4-1328
1329	×	718	98.2	328.0	229.8	FIBROADENOMA: MAMMARY GLAND HEMORRHAGE: BRAIN	11-F4-1329
1330	>	741	103.0	384.7	281.7	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND	11-F4-1330
1331	>-	741	93.8	363.7	269.9	ADENOMA: PITUITARY GLAND	11-F4-1331
1332	>	741	89.7	369.8	280.1	ISLET-CELL ADENOMA : PANCREAS ADENOMA: PITUITARY GLAND	11-F4-1332@
1333	3	736	0.86	283.2	185.2	PHEOCHROMOCYTOMA: ADRENAL GLANDS PAPILLARY ADENOMA: LUNG SARCOMA: PERITONEUM	11-F4-1333

Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .
AFTER START OF TREATMENT. 1) FATE : 2) DAYS :

APPENDIX 10-F4-44

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM

	X , FOUND DEAD .	EXTREMIS :	LED IN EXT	KIL	Y , KILLED ON SCHEDULE ; AFTER START OF TREATMENT.	Y X KILLED AFTER STAR	1) FATE: 2) DAYS:
11-F4-1343	ADENOMA: PITUITARY GLAND	220.8	319.1	98.3	272	>-	1343
11-F4-1342	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	183.6	273.3	89.7	658	×	1342
11-F4-1341	NO SIGNIFICANT LESION	282.6	379.0	7.96	742	>-	1341
11-F4-1340	PHEOCHROMOCYTOMA: ADRENAL GLANDS	219.1	316.7	9.76	742	>	1340
11-F4-1339	PHEOCHROMOCYTOMA: ADRENAL GLANDS POLYP: VAGINA ADENOMA: PITUITARY GLAND	242.2	337.6	7.56	742	>-	1339
11-F4-1338	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND	218.1	311.1	93.0	742	> -	1338
11-F4-1337	POLYP: UTERUS ADENOMA: PITUITARY GLAND	230.7	327.4	7.96	769	3	1337
11-F4-1336	ADENOMA: PITUITARY GLAND C-CELL ADENOMA: THYROID GLANDS POLYP: UTERUS	212.8	305.3	92.5	742	> -	1336
11-F4-1335	ADENOMA: PITUITARY GLAND ISLET-CELL ADENOMA : PANCREAS	155.0	251.9	6.96	728	3	1335
11-F4-1334	NO SIGNIFICANT LESION	549.9	342.1	92.2	272	> -	1334
(APPENDIX NUMBER)	MAJOR PATHOLOGICAL FINDINGS	H 1	FINAL	_ :	; ; ;	- 1	NUMBER
REFFERENCE	PROBABLE CAUSE OF DEATH	0)	IGHT (BODY WE		1)	ANIMAL
STUDY NO. 83004							

APPENDIX 10-F4-45

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. CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

ANIMAL	1)	(2)		WEIGHT (G)	PROBABLE CAUSE OF DEATH	REFFERENCE
NUMBER			INITIAL	FINAL	GAIN	MAJOR PATHOLOGICAL FINDINGS	(APPENDIX NUMBER)
1344	3	718	97.1	273.5	176.4	ET-CELL ADENOI PANCREAS ONUCLEAR CELL MULTIPLE ORGA NULOSA-THECA MOR: OVARIES ROMA: UTERUS	11-F4-1344
1345	>	743	90.3	320.9	230.6	POLYP: UTERUS ADENOMA: MAMMARY GLAND	11-F4-1345
1346	>-	743	7.86	302.6	203.9	ADENOMA: PITUITARY GLAND	11-F4-1346
1347	> -	243	9.46	357.0	262.4	MALIGNANT LYMPHOMA : SPLEEN	11-F4-1347
ы 2 2	>	743	96.1	293.1	197.0	PHEOCHROMOCYTOMA: ADRENAL GLANDS C-CELL ADENOMA: THYROID GLANDS	11-F4-1348
1349	>-	243	100.6	309.1	208.5	GLIOSIS: BRAIN	11-F4-1349
1350	> -	243	95.4	338.2	242.8	NO SIGNIFICANT LESION	11-F4-1350
1351	>-	243	98.9	385.2	286.3	NO SIGNIFICANT LESION	11-F4-1351
1352	>-	243	8.66	307.5	207.7	LEIOMYOMA: UTERUS CHORDOMA: VFRTFRRA	11-F4-1352

1) FATE: W , KILLED IN <u>EXTREMIS</u>; Y , KILLED ON SCHEDULE. 2) DAYS: AFTER START OF TREATMENT.

3) GRADE OF MASS:
A . SMALL AND/OR .SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULIIPLE

11-F1-1001 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) RUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1001 Y	240	HEART		u.	FIBROSIS	+	NO SIGNIFICANT LESION
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		8	BLOOD ABSORPTION	+	
		SPLEEN		xω	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES CALCIFICATION	+ +	
		LARYNGOPHARYNX		нт	INFILTRATION OF LEUCOCYTES HYPERSECRETION	+ +	
		LUNG		I	INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ +	
		STOMACH		J	CYST	+	
		LIVER		шшоп	FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA PROLIFERATION OF BILE DUCT	+ + + +	
		PANCREAS		~	REGENERATIVE CHANGE	+	
		SYBMOLY		d.	PIGMENTATION (BILATERAL)	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

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CONTINUED	
11-F1-1001	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

1 1 1 1 1 1	! ! ! !			! ! ! ! ! !		1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) NUMBER FATE	1) 4) ATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1001	072 k	KIDNEYS					
				•	CHRONIC PROGRESSIVE	++	
					INFILITED OF LEUCOCYTES	+	
					CALCIFICATION (BILATERAL)	+	
		ADRENAL GLANDS	. ,	•	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	RETINAL ATROPHY (UNILATERAL) CATARACT (UNILATERAL)	+ +	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	
		OPTIC NERVE			EDEMA (UNILATERAL)	+	

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F1-1002 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! ! !					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SIUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1002 Y	240	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FOLTF: UIERUS ADENOCARCINOMA: CLITORAL GLAND
		LYMPH NODES			BLOOD ABSORPTION	+	
		(PULM.HILUS) SPLEEN	ENLARGEMENT	+ +	EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
		MASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		PAROTID GLANDS			REGENERATIVE CHANGE (BILATERAL)	+ +	
		LIVER	DISCOLORATION	+ + +	INFILTRATION OF LEUCOCYTES SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS	++++	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

2) GRADE : NEGATIVE NOT PRESENTED	+ \ SLIGHT	++ \ MODERATE	+++ > SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

CONTINUED 11-F1-1002 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

MATION 1		1 1 1			1			STUDY NO. 83004
WFILTRATION OF LEUCOCYTES	1	- :	1	PATHOLO	2)3) GRADE	g	2) GRADE	CAUSE MAJOR
INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENNATION (BILATERAL) + POLYP PIGMENTATION OF LEUCOCYTES + ADENOCARCINOMA HYPERPLASIA OF C-CELLS (UNILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA PIGMENTATION + PIGME		240	KIDNEYS		 			
LARGEMENT + POLYP CALCIFICATION (BILATERAL) + + POLYP PIGMENTATION OF LEUCOCYTES + + INFILTRATION OF C-CELLS (UNILATERAL) + (UNILATERAL) + HYPERPLASIA OF C-CELLS (UNILATERAL) + (UNILATERAL) + PIGMENTATION OF LEUCOCYTES + CONILATERAL) + PIGMENTATION OF LEUCOCYTES + CONILATERAL) + PIGMENTATION OF LEUCOCYTES + CONILATERAL) + PIGMENTATION OF LEUCOCYTES + CONILATERAL OF LEUCOCYTES O						0 F	+	
LARGEMENT + POLYP PIGMENTATION INFILTRATION OF LEUCOCYTES + ADENOCARCINOMA HYPERPLASIA OF C-CELLS (UNILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA PIGMENTATION PIGMENTATION 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MA + A SLIGHT + A SLIGHT + A SEVERE C A LARGE							+ +	
AORRHAGE + ADENOMA HYPERPLASIA OF C-CELLS (UNILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA HYPERPLASIA PIGMENTATION PIGMENTATION + SLIGHT + SLIGHT + NODERATE + SEVERE			UTERUS	ENLARGEMENT		0 F	+ +	
HYPERPLASIA OF C-CELLS (UNILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA HYPERPLASIA PIGMENTATION PIGMENTATION + PIGMENTATION + PIGMENTATION + PIGMENTATION + PIGMENTATION + SLIGHT + SLIGHT + SLIGHT + NODERATE B : MEDIAL H+ NODERATE C : LARGE			CLITORAL GLAND	MASS		DENOCARCINOMA		
HYPERPLASIA OF C-CELLS (UNILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA PIGMENTATION PIGMENTATION + PIGMENTATION + SLIGHT + SLIGHT + NODERATE + SLIGHT + SEVERE C LARGE			PITUITARY GLAND	HEMORRHAGE		DENOMA		
INFILTRATION OF LEUCOCYTES + (UNILATERAL) HYPERPLASIA PIGMENTATION + PIGMENTATION C LARGE ++ SLIGHT ++ MODERATE C LARGE C LARGE			THYROID GLANDS		Ħ	OF C-CELLS		
PIGMENTATION PIGMENTATION PIGMENTATION A SMALL + SLIGHT + SLIGHT + SEVERE C LARGE			ADRENAL GLANDS		Н	0 F	+	
PIGMENTATION + PIGMENTATION + PIGMENTATION + SOURCE STATE			MAMMARY GLAND		I	YPERPLASIA	+	
PIGMENTATION + 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MA + SLIGHT A SMALL + NODERATE B & MEDIAL + + SEVERE C & LARGE			BRAIN		д	IGMENTATION	+	
			SPINAL CORD		۵.	IGMENTATION	+	
2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE OF MA 4								
++ NODERATE B NEDIAL C LARGE	1	 >- 	KILLED ON	E 2) GRADE	NEGA+	NOT PRESENTED 3)	OF MA	
	4) DAYS	: AFT	ER START OF TREATM	+		ATE RE	MEDIAL MEDIAL	OR SINGULAR /OR SPORADIC OR MULTIPLE

APPENDIX 11-F1-1003

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	PAPILLARY ADENOMA: LUNG	ADENOMA: PITUITARI GLAND SQAMOUS CELL PAPILLOMA : SKIN	C-CELL ADENOMA: INTROID GLANDS										
! ! ! !	2) GRADE	+	+	+	+ + +	+ +	+	+	+	+	+ +	+ +	+ + S	
	HISTOPATHOLOGICAL FINDINGS	FIBROSIS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	BLOOD ABSORPTION	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	INFILTRATION OF LEUCOCYTES	PAPILLARY ADENOMA CALCIFICATION OF VASCULAR WALL	INFILTRATION OF LEUCOCYTES	DILATATION OF DUCT	(UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	ANGIECTASIA Smail Granii Oma	INFILTRATION OF LEUCOCYTES	MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS	
	2)3) GRADE				+		+			_	+			
	GROSS PATHOLOGICAL FINDINGS				ENLARGEMENT		NODULE				REDDISH PATCH			
	ORGAN	HEART	THYMUS	LYMPH NODES	(PULM.HILUS) SPLEEN	NASAL CAVITY	T UNG	STOMACH	PAROTID GLANDS		LIVER			
! ! ! !	4) DAYS	072												
! ! !	1) FATE	> -												
1 1 1 1 1	ANIMAL NUMBER	1003												

3) GRADE OF MASS :	A , SMALL AND/OR SINGULAR	B / MEDIAL AND/OR SPORADIC	C , LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ \ SLIGHT	++ , MODERATE	+++ / SEVERE
1) EATE . Y . KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

CONTINUED 11-F1-1003 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1	STUDY NO. 83004	
1) FATE D	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	, 2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FYNDINGS	ı
7 7	240	LIVER		1 1 1 1 1 1 1 1				1
					CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS FOCAL NECROSIS	+ + +		
		PANCREAS			INFILTRATION OF LEUCOCYTES	+		
		KIDNEYS		_	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENIATION (BILATERAL)	+ +		
					INFILTRATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +		
	_	UTERUS		u.	PIGMENTATION	+		
	_	PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	АБЕ ИОМА			
	•	THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+		
	•	ADRENAL GLANDS		I	HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+		
	O)	SKIN	NODULE	+	SQUAMOUS CELL PAPILLOMA INFILTRATION OF LEUCOCYTES	+		
	Τ.	HARDERIAN GLANDS		н	INFILTRATION OF LEUCOCYTES (BILATERAL)	+		
FATE:	X 	KILLED ON SCHEDULE	2) GRADE	: NEGATIVE N + / SLIGHT	NOT PRESENTED 3) GRADE	OF MASS:	OF MASS:	
DAYS :	AFTER	START OF TREATMENT				TEDIAL AND,	JOHN STANDLAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

CONTINUED
11-F1-1003
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

					STUDY NO. 83004
ANIMAL 1) 4) ORGAN FATE DAYS NUMBER	0 G	2)3) GRADE	HISTO	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
BRAIN		GL 	PIGMENTATION	! ! ! ! ! ! ! !	
SPINAL CORD		α,	PIGMENTATION	+	

11-F1-1004 APPENDIX

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CHRONIC AND CARCINOGEMIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1 1 1			 		1	STUDY NO. 83004
ANIMAL 1) NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1004 W	1 616	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
		SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	+	
		PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER	YELLOWISH CHANGE	+ +	FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + + v	
		PANCREAS			INFILTRATION OF LEUCOCYTES	+	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + + + + +	
		OVARIES			ATROPHY (BILATERAL)	+	
		UTERUS			PIGMENTATION	+	
1) FATE		W, KILLED IN EXTREMIS AFTER START OF TREATMENT	2) GRADE	NEGATIVE NOT SLIGHT NODERATE H SEVERE	PRESENTED 3) GRADE A	OF MASS SMALL AN MEDIAL A LARGE AN	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED 11-F1-1004 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1	! ! !	! ! !			1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) KATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1004	3	616	VAGINA			АТВОРНҮ	+ +	
			PITUITARY GLAND	MASS HEMORRHAGE	« +	ADENOMA	٠.	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	IMPRESSION	++			

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

11-F1-1005 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX :

FEMALE О РРМ

ANIMAL 1) FATE D. RUMBER	4) ORGAN DAYS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1005 W 6'	691 HEART			INFILTRATION OF LEUCOCYTES	+	ADENOCARCINOMA: CLITORAL
	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
	LYMPH NODES			BLOOD ABSORPTION	+	
	LYMPH NODES			BLOOD ABSORPTION	+	
	(PUCM.HICUS) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
	BONE MARROW			MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
	NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
	LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
	רחאפ			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL ADENOMATOSIS HISTIOCYTOSIS	+ + + + +	
	LIVER			SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ + + + + +	
	KIDNEYS			CHRONIC PROGRESSIVE	+ +	

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APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	! ! !			: : : : : : : : : : : : : : : : : : : :			
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDING
1005 W	~					 	
					PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + +	
		UTERUS	ENLARGEMENT	+	PIGMENTATION	+	
		VAGINA			INFILTRATION OF LEUCOCYTES	+	
		CLITORAL GLAND	MASS	Ą	ADENOCARCINOMA		
		PITUITARY GLAND	E N L A R G E M E N T H E M O R R H A G E	+ + + + +	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HEMORRHAGE (UNILATERAL)	÷ +	
		SKIN			EPIDERMOID CYST INFILITRATION OF LEUCOCYTES	+ +	
		MAMMARY GLAND	MASS	Ą	HYPERPLASIA	+ + +	
		EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
		HARDERIAN GLANDS			HYPERSECRETION (BILATERAL)	+	
		BRAIN	IMPRESSION		MIGRATION OF HEMOSIDERIN-L	+	
1) FATE		LLED IN	11.S 2.) GRADE	EG A	NOT PRESENTED 3) GRADE AT A A A A A A A A A A A A A A A A A A	OF MASS : SMALL AND/ MEDIAL AND	OF MASS : SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
4) DAYS	••	AFTER START OF TREATMENT	MENT	+++ SEV	· ·	LAKGE AND/	UK MULIPLE

CONTINUED	
11-F1-1005	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

ANIMAL 1) 4) KUMBER	1) (TE DA	4) DAYS	ORGAN GROSS	PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICA FINDI	L 2)	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1005	w 691 BRAIN	91	1 1 1 1 1 1 1 1		:	CELLS HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE PIGMENTATION	+ + + 	
			SPINAL CORD		ď.	PIGMENTATION	+	

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

APPENDIX 11-F1-1006

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

STUDY NO. 83004	
STUDY NO. 830.	

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SIUDY NO. 83004
ANIMAL 1) 4) NUMBER FATE DAYS	S ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1006 W 616	HEART			FIBROSIS	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	
	THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	SCHOOLS TIOITARE GLAND
	LYMPH NODES (PULM.HILUS)		B	BLOOD ABSORPTION	+	
	SPLEEN		x	HEMOSIDEROSIS	+++	
	NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
	TRACHEA		Ξ	HYPERSECRETION	+	
	LUNG		Π	INFILTRATION OF LEUCOCYTES	+	
	PAROTID GLANDS		۵	DILATATION OF DUCT (BILATERAL)	+	
	LIVER		S I	FATTY DEGENERATION OF HEPATIC SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	TIC CELLS ++ ++ ++	
	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	ATERAL) + + + + + + + + + + + + + + + + + + +	
	OVARIES		AT	ATROPHY (BILATERAL)	+	
1) FATE : W ,	KILLED IN EXTREMIS	2) GRADE	: NEGATIVE NOT + / SLIGHT	PRESENTED	10	OF MASS :
4) DAYS : AF	AFTER START OF TREATMENT		++ , MODERATE +++ , SEVERE	ATE E		MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED 11-F1-1006 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE M P P M LEVEL AND SEX : STUDY NO. 83004

FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
3	616	UTERUS			PIGMENTATION	+	
		VAGINA			INFILTRATION OF LEUCOCYTES	+	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + +	ADENOMA		
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		MAMMARY GLAND			HYPERPLASIA	++	
		BRAIN	IMPRESSION	+	PIGMENTATION HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + + +	
		SPINAL CORD			PIGMENTATION	+	

1006

ANIMAL NUMBER

	2) GRADE : NEGATIVE NOT PRESENTED	+ > SLIGHT	++ ', MODERATE	+++ SEVERE
	2			
	1) FATE : W , KILLED IN EXTREMIS	The company of the last of the		4) DAYS : AFTER START OF TREATMENT
1	3			٠.
1	ш			۲ ک
1	A A			DA
1	1)			7

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1	1	1 1 1			 1 1 1 1			
ANIMAL NUMBER	1) FATE	4) DAYS	0RGAN	GROSS PATHOLOGICAL FINDINGS	,2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1007	3	296	THYMUS		_	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NIFICANT L
			LYMPH NODES		1	BLOOD ABSORPTION	+	
			SPLEEN		- -	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ +	
			NASAL CAVITY			OSTEOSCLEROSIS GRANULATION INFILTRATION OF LEUCOCYTES	+ + + + +	
			LUNG		0 7	OSSEDUS TISSUE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ + +	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS	+ + + + + + Ø	
			KIDNEYS		1 2	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUE	
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APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	; ; ; ;						STUDY NO. 83004
ANIMAL 1) RUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1007 ¼	965	KIDNEYS		<u>u.</u>	PIGMENTATION (BILATERAL)	+	
		UTERUS		J	DILATATION OF DUCT	+	
		PARATHYROID GLANDS		-	HYPERPLASIA OF CHIEF CELLS (UNILATERAL)	+ +	
		BONE (FEMUR)		J	OSTEOSCLEROSIS	+ +	
		MUSCLE (Q.		1	АТВОРНУ	+++	
		FEMUKIS) HARDERIAN GLANDS	40		INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN		ш	PIGMENTATION	+	
		SPINAL CORD		ш.	PIGMENTATION	+	
		SCIATIC NERVE			DEMYELINIZATION	+++	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W . KILLED IN EXTREMIS

APPENDIX 11-F1-1008

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

! : : : : : : : :	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			 		; ; ; ;	STUDY NO. 83004
ANIMAL 1) NUMBER FATE	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	TOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1008 Y	072 ,	HEART			FIBROSIS	+	CHRONIC PROGRESSIVE
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	GLOMERULONEPHROPATHY : KIDNEYS ADENOMA: PITUITARY GLAND
		LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION ATROPHY	·+ + +	
		SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES HYPERSECRETION	+ + + +	
		LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS	+ + + +	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + + + + +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND	ENLARGEMENT	+ +			
1) FATE 4) DAYS	! ! •• ••	Y , KILLED ON SCHEDULE AFTER START OF TREATMENT	2) GRADE	N	PRESENTED 3) GRADE B	OF MASS: SMALL AND/OR MEDIAL AND/OR LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

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11-F1-1008
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

† † † †	1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						STUDY NO. 83004
ANIMAL 1) HUMBER	FA1E	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLGGICAL FINDINGS
1008	>-	072	PITUITARY GLAND	HEMORRHAGE	 		 	
			THYROID GLANDS		I	HYPERPLASIA OF C-CELLS (BILATERAL)		
			ADRENAL GLANDS		A C	ANGIECTASIA (UNILATERAL) PIGMENTATION (UNILATERAL)	+ +	
			MAMMARY GLAND		Σ	HYPERPLASIA	+	
			HARDERIAN GLANDS		H	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ .	
			BRAIN	IMPRESSION	+	PIGMENTATION	+	
			SPINAL CORD		۵	PIGMENTATION	+	

1) FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIV + , SLI + , SLI

4) DAYS : AFTER START OF TREATMENT

D S) GRADE OF MASS:
A SMALL AND/OR SINGULAR
B MEDIAL AND/OR SPORADIC
C LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

11-F1-1009 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL

FEMALE
O PPM
SEX :
AND

	 			; ; ; ; ;			NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDIRGS
1009 Y	240	HEART		7	INFILTRATION OF LEUCOCYTES FIBROSIS	+ +	ADENOMA: PITUITARY GLAND
		THYMUS		Τ.	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		ď	ANGIECTASIA	+ +	
		SPLEEN		I W	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX		x	HYPERSECRETION	+	
		TRACHEA		I	INFILTRATION OF LEUCOCYTES	+	
		LUNG		010	OSSEOUS TISSUE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ + +	
		PAROTID GLANDS		I &	INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	. + +	
		LIVER		HШ	INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS	+ + + S	

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CONTINUED 11-F1-1009 APPENDIX

CHRONÍC AND CARCINOGENIC INHALATION TOXIÇOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS												
! ! ! !	2) GRADE		+ +	+ +	+++	+ + +	+	+		+	+	+	+
	HISTOPATHOLOGICAL FINDINGS		SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT	CHRONIC PROGRESSIVE	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	INFILTRATION OF LEUCOCYTES (BILATERAL)	PIGMENTATION	ADENOMA	VACUOLAR DEGENERATION OF CORTICAL CÈLLS (UNILATERAL)	INFILTRATION OF LEUCOCYTES (BILATERAL)	INFILTRATION OF LEUCOCYTES (UNILATERAL)	MIGRATION OF HEMOSIDERIN-LADEN CELLS
	2)3) GRADE								A +		I	I	Ψ + +
	GROSS PATHOLOGICAL FINDINGS								ID MASS HEMORRHAGE			DS	IMPRESSION
	ORGAN	LIVER			KIDNEYS			UTERUS	PITUITARY GLAND	ADRENAL GLANDS		HARDERIAN GLANDS	BRAIN
1 1 1 1 1 1	4) DAYS	072											
1 1	1) FATE	>-											
 	ANIMAL NUMBER	1009											

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

CONTINUED	
11-F1-1009	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	086	AN GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL 2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDIKGS
1009 Y 74.	Y 740 BRAIN		a . O	PIGMENTATION DILATATION OF CEREBRAL VENTRICLE	+ +	
	SPINAL CORD	· ·		PIGMENTATION		

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULIPLE 2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE: Y / KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		1 1 1 1 1 1 1	! ! ! !	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	4) ORGAN YS	GROSS PATHC	PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRAD	2) ADE	PROB OF DEA ATHOLOG
1010 Y 740) HEART			± H	LEUCOC	+ + ES	! ! ! !	POLYP: UTERUS C-CELL ADENOMA: THYROI
	THYMUS			т.	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+ .		GLANDS
	LYMPH NODES			ш	BLOOD ABSORPTION	+	_	
	SPLEEN			тм	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIE	++	_	
	NASAL CAVITY			I	INFILTRATION OF LEUCOCYTE	+ S:		
	LUNG			н н	INFILTRATION OF LEUCOCYTE HEMORRHAGE	+ + S		
	STOMACH			H	INFILTRATION OF LEUCOCYTE	+ S:		
	LIVER	M A S S		A THINE IF	ANGIECTASIA FATTY DEGENERATION OF HEPATIC INFILTRATION OF LEUCOCYTES HEMORRHAGE SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA PROLIFERATION OF BILE DUCT THICKENING OF CAPSULE	ATIC CELLS + S + CELLS + T + T +		
	KIDNEYS			S	RONIC PROGRESSIVE LOMERULONEPHROPATHY	ATERAL		•
1) FATE : Y	XILLED ON SCHEDUL	 	2) GRADE :	NEGATIVE N + SLIGHT	NOT PRESENTED	ADE	OF MASS : SMALL AND/OR	OR SINGULAR
4) DAYS : AF	AFTER START OF TRE/	TREATMENT	+ + + + + +	++ / MODERATE ++ / SEVERE	RATE RE	B / MEDI.	AL AND E AND/	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED
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APPEŅDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

THE BOAY 10 CORDAN GROSS PATHOLOGICAL 20 33 HISTOPATHOLOGICAL 20 0 FRODABLE CAUSE				1 1 1 1 1		1 1 1 1 1 1 1	STUDY NO. 83004
CALCIFICATION (BILATERAL) PIGMENTATION CLLATERAL) INFLITRATION CLLATERAL) ADTEMNATION CLLATERAL) THYROID GLANDS (BILATERAL) (BILATERAL) (BILATERAL) (BILATERAL) (BICHENTATION (CONTICAL COCCLL ADENOMA (UNILATERAL) (COLLA ADENOMA (UNILATERAL) (CONTLATERAL (CONTL	1) FATE	! ! !	1	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
THYROID GLANDS ENLARGEMENT + PIGMENTATION THYROID GLANDS CUNILATERAL) + C-CELL ADENOMA CUNILATERAL) ADRENAL GLANDS CUNILATERAL) BRAIN SPINAL CORD FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE CONTICAL CO	>				CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + +	
THYROID GLANDS ENLARGEMENT + C-CELL ADENOMA (UNILATERAL) ADRENAL GLANDS BRAIN SPINAL CORD FATE : Y , KILLED ON SCHEDULE T , MODERATE START OF TREATMENT + , SEVERE C - CELLS (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) PIGMENTATION PIGMENTATION FATE : Y , KILLED ON SCHEDULE T , MODERATE START OF TREATMENT + , NODERATE C , CELLS (UNILATERAL) PIGMENTATION PIGMENTATION FATE : Y , KILLED ON SCHEDULE T , MODERATE START OF TREATMENT T + , NODERATE C , CELLS (UNILATERAL NODERATE START OF TREATMENT) T + , SEVERE		UTERUS	ENLARGEMENT	+	PIGMENTATION POLYP	+	
ADRENAL GLANDS CELLS (BILATERAL) BRAIN SPINAL CORD PIGMENTATION PIGMENTATION PIGMENTATION FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE + , MODERATE B , A , H + , SEVERE C , SEVERE		THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+			
PIGMENTATION SPINAL CORD PIGMENTATION					VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	
FATE: Y, KILLED ON SCHEDULE TAKE TO START OF TREATMENT THE START OF TREATMEN		BRAIN			PIGMENTATION	+	
FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE + , SLIGHT		SPINAL CORD			PIGMENTATION	+	
FATE : Y , KILLED ON SCHEDULE DAYS : AFTER START OF TREATMENT C , A ++ , SEVERE C , C ,							
FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE + , SLIGHT + , MODERATE B , A , DAYS : AFTER START OF TREATMENT ++ , SEVERE C ,							
FATE : Y , KILLED ON SCHEDULE + , SLIGHT + , MODERATE B , C ,							
FATE: Y . KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE + . SLIGHT + . MODERATE B							
DAYS: AFTER START OF TREATMENT +++ , SEVERE C ,	 FATE :	KILLED ON	2) GRADE	N H G /	NOT PRESENTED 3) GRADE	OF MASS :	R SINGULAR
	DAYS :	START OF		` `		MEDIAL AND/ LARGE AND/O	OR SPORADIC R MULTIPLE

APPENDIX 11-F1-1011

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

ANIMAL 1) ANIMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1011 X	711	HEART		; []]] ! ! !	FIBROSIS	! ! ! ! + ! + !	ASTROCYTOMA: BRAIN
		SPLEEN			HEMOSIDEROSIS CALCIFICATION OF VASCULAR WALL EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG	CONGESTION	+ + +	CONGESTION	++++	
		LIVER			INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC C SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	CELLS + + + + + + + + + + + + + + + + + +	
		KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	
		PITUITARY GLAND	HEMORRHAGE	+			
		BRAIN	MASS	A	PIGMENTATION ASTROCYTOMA	+	
		SPINAL CORD			PIGMENTATION	+	
1) FATE	· · · · · · · · · · · · · · · · · · ·	FOUND DEAD	2) GRADE	: NEGATIVE NOT + , SLIGHT	PRESENTED 3)	10 E	OF MASS: SMALL AND/OR SINGULAR
S > 0 C / 7	S : AFTER	ER START OF TREATMENT		++ , MOD +++ , SEV	MODERATE B SEVERE C		MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1012

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

 	1 1 1 1			 			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1012 X	329	HEART			FIBROSIS	+	KERATOACANTHOMA: STOMACH
		THYMUS	BLACKISH CHANGE	+			
		LYMPH NODES			LYMPHOCYTIC HYPERPLASIA	+	: KIDNEYS
		LYMPH NODES			PROLIFERATION OF RETICULAR CELL	LS ++	
		SPLEEN			HEMOSIDEROSIS	+ + +	
		LARYNGOPHARYNX			INFLAMMATION	+	
		Гимб		_	CONGESTIVE EDEMA	+ + +	
		TONGUE	MASS	A	KERATOACANTHOMA		
		STOMACH		-	KERATOACANTHOMA		
		LIVER		C 4 07	CONGESTION FATTY DEGENERATION OF HEPATIC SMALL GRANULOMA	CELLS +++	
ř		PANCREAS			REGENERATIVE CHANGE	+ +	
		KIDNEYS		701	INTERSTITIAL NEPHRITIS (UNILATERAL) CONGESTION (BILATERAL) PIGMENTATION (BILATERAL)	ERAL) +++ +++ ++	
		PITUITARY GLAND		٤	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
1) FATE	× ×	FOUND DEAD	2) GRADE	: NEGATIVE NOT + , SLIGHT	PRESENTED 33	ADE	
4) DAYS	: AFTER	ER START OF TREATMENT		++ , MODE +++ , SEVE	7 E	B , MEDIAL , C , LARGE AN	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED
11-F1-1012
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

STUDY NO. 83004

	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS					OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
	2) GRADE					3) GRADE B C
	HISTOPATHOLOGICAL FINDINGS	INFILTRATION OF LEUCOCYTES (UNILATERAL)				 NOT PRESENTED HT RATE RE
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L 2)3) GRADE					. NEGATIVE + , SLIG ++ , MODE +++ , SEVE
f	GROSS PATHOLOGICAL FINDINGS					2) GRADE
	ORGAN GR	HARDERIAN GLANDS				FOUND DEAD
	4) DAYS	329 H				X , FC
	1) FATE	×				FATE::
	ANIMAL NUMBER	1012				1) 1) 7

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED

+ > SLIGHT ++ > MODERATE +++ > SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

APPENDIX 11-F1-1013

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

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ANIMAL 1) NUMBER	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1013 Y	240	HEART		ŭ.	FIBROSIS	+	ISLET-CELL ADENOMA
		THYMUS		-	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	. TANCAEAU
		LYMPH NODES		ш	BLOOD ABSORPTION	+	
		SPLEEN		W	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		BONE MARROW		u.	PROLIFERATION OF RETICULAR CELLS	+	
		NASAL CAVITY		1	INFILTRATION OF LEUCOCYTES	+	
		LUNG		011	CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES HISTIOCYTOSIS	+ + +	
		PAROTID GLANDS		ıc	REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA EXTRAMEDULLARY HEMATOPOIESIS FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES	+ + + + + + · · ·	
		PANCREAS	NODULE	I +	ISLET-CELL ADENOMA		
	1 1 1			11111111			1 1 1 1 1 1 1 1 1 1

CONTINUED	
11-F1-1013	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

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ANIMAL IV FATE NUMBER	E DAYS		FINDINGS	GRADE	LOCATION PROPERTY OF THE PROPE	GRADE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1013 Y	240	KIDNEYS		0 4	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
				0	INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	· + +	
		UTERUS			DILATATION OF DUCT PIGMENTATION INFILTRATION OF LEUCOCYTES	+ + +	
		ADRENAL GLANDS		_	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		HARDERIAN GLANDS	(0	[INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN		ŭ.	PIGMENTATION	+	
		SPINAL CORD		ш	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F1-1014APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 2 1 1 1 1 1		 	STUDY NO. 83004
ANIMAL 1) NUMBER FATE	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	ROBABLE CAUSE DEATH OR MAJOR LOGICAL FINDINGS
1014 W	v 651	неакт			INFILTRATION OF LEUCOCYTES FIBROSIS	+ +	SQUAMOUS CELL CARCINOMA : TONGUE
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES			LYMPHOCYTIC HYPERPLASIA	+++	
	٠	SPLEEN			EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ + + +	
		NASAL CAVITY	-		INFILTRATION OF LEUCOCYTES	+ +	
		. rung			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ +	·
		TONGUE	MASS	Ą	SQUAMOUS CELL CARCINOMA		
		ESOPHAGUS		-	HYPERKERATOSIS	+	
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+ .	
		LIVER			ANGIECTASIA FATTY DEGEMERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	+ + + + v	
		KIDNEYS		_	PIGMENTATION (BILATERAL)	+ +	

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NOT	++ , MODERATE ++ , SEVERE	
VE 161	VEF	
EGATIVE N	N N N	
NEG+	++ , MODERA +++ , SEVERE	
	+ +	
2) GRADE : NEGATIVE NOT + , SI 16HT		
5)		
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3	A	
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1) FATE : W , KILLED IN EXTREMIS	4) DAYS : AFTER START OF TREATMENT	
2		
•	~	

2) GRADE : NEGATIVE NOT PRESENTED

CONTINUED 11-F1-1014 APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 			: : : : : : : :			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	, 2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1014 W	651	KIDNEYS					
				S	SALCIFICATION (BILATERAL)	+	
				I	INFILTRATION OF LEUCOCYTES	+	
				Ξ	(UNICALERAL)		
				. cz	REGENERATIVE RENAL TUBULE	+ +	
				H	(UNILATERAL) THICKENING OF BASEMENT MEMBRANE (UNILATERAL)	+	
		UTERUS		α.	PIGMENTATION	+	
		PITUITARY GLAND		Σ	MIGRATION OF HEMOSIDERIN-LADEN	+	
				x	CELLS HEMORRHAGE	+	
		THYROID GLANDS		I	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		ADRENAL GLANDS'		A	ANGIECTASIA (UNILATERAL)	+	
		EYE BALLS		S	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+ +	
		BRAIN		۵.	PIGMENTATION	+	
		SPINAL CORD		d .	PIGMENTATION	+	

3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C , LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ , SLIGHT	++ , MODERATE	+++ > SEVERE
1) FATE: W , KILLED IN EXTREMIS			4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1015

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1	1 1	 						STUDY NO. 83004
ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1015	3	275	неакт			FIBROSIS	; ; ; ; ; ;	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	· ·		HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
			BONE MARROW			HYPOHEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	YELLOWISH CHANGE	+	FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES SMALL GRANULOMA	+ + + S 	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) URINE CAST (BILATERAL)	++++++	

TED 3) GRADE OF MASS:	A / SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C . LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ , SLIGHT	++ \ MODERATE	+++ SEVERE
FAIE : W / KILLED IN EXTREMIS .			DAYS : AFTER START OF TREATMENT

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1)

A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS :.

APPENDIX 11-F1-1015 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1	; ; ; ;			 		! ! ! ! !	STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1015 W	243	KIDNEYS			THICKENING OF BASEMENT MEMBRANE (UNILATERAL)	+	
		URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
		UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	
		VAGINA			INFILTRATION OF LEUCOCYTES HYPERPLASIA OF MUCOSAL EPITHELIUM	+ +	
		PITUITARY GLAND	MASS HEMORRHAGE	4 + 4 +	ADENOMA		
		SKIN		•	INFILTRATION OF LEUCOCYTES	+	
		MAMMARY GLAND			HYPERPLASIA	++	
		BRAIN	HEMORRHAGE	+	PIGMENTATION HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE	+ + + +	

+ + +

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F1-1016 APPENDIX

CHRONIC AND CARCINGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1 1 1 1	1	1			! ! ! ! ! !		! ! ! ! !	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1016	>-	240	неакт			FIBROSIS	+	PAPILLARY ADENOMA: LUNG
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+++	C-CELL ADENOMA: THYROID GLANDS POLYP: UTERUS
			LYMPH NODES			BLOOD ABSORPTION	+	
			(FULM. MILUS) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES INFLAMMATION	+ +	
			r un G	NODULE	+	INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL PAPILLARY ADENOMA	+ +	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	•		SMALL GRANULOMA PROLIFERATION OF BILE DUCT INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS	+ + + + +	
			PANCREAS		-	ATROPHY OF PANCREATIC ACINUS	+++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

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CONTINUED
11-F1-1016
APPEŅDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1 1 1	! ! !	! ! !			; ; ; ; ;			STUDY NO. 83004
ANIMAL HUMBER	- 1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1016	> -	072	PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS		• •	INFILTRATION OF LEUCOCYTES		
						PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE	+ + +	
						GLOMERULONEPHROPATHY (BILATERAL)		
			UTERUS	ENLARGEMENT	+ +	POLYP PIGMENTATION INFILTRATION OF LEUCOCYTES DILATATION OF DUCT	+ + +	
			THYROID GLANDS		0	C-CELL ADENOMA (UNILATERAL)		
			HARDERIAN GLANDS	6		HYPERSECRETION (UNILATERAL)	+	
			BRAIN		ū.	PIGMENTATION	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

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11-F1-1017 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	; ; ; ;			; ; ; ; ;			STUDY NO. 83004
ANIMAL F) NUMBER	1) FATE	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1017	×	979	MULTIPLE ORGANS			\checkmark		 NUCLEAR
			ABDOMINAL CAVITY HEMORRHAGE	Y HEMORRHAGE	+			: MULTIPLE ORGANS
			неакт			FIBROSIS	++	
			THYMUS	· ·		HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	ENLARGEMENT NODULE	+ +			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
			r ung			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE ENLARGEMENT ROUGHNESS OF SURFACE	+ + +	FOCAL ATROPHY OF HEPATIC CELLS CHOLANGIOFIBROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + +	
			KIDNEYS			CALCIFICATION (UNILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

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11-F1-1017
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1 2 2 4 8	1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	TOPATHOLOGICA FINDI	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1017	×	979	KIDNEYS				1 1 1 1 1 1 1 1	1
				-		THICKENING OF BASEMENT MEMBRANE	+	
						CUNICATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)		
			URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
			OVARIES	BLACKISH CHANGE (UNILATERAL)	+			
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE: X , FOUND DEAD

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F1-1018

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL

1018

1	1									
STUDY NO. 83004	PROBABLE CAUSE. OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	POLYP: UTERUS								
! ! ! !	2) GRADE	+	+	+ + +	+ + + +	+	+ +	+ + + + +	+	. + +
	HISTOPATHOLOGICAL FINDINGS	FIBROSIS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	INFILTRATION OF LEUCOCYTES OSTEOSCLEROSIS	INFILTRATION OF LEUCOCYTES	INFILTRATION OF LEUCOCYTES PLEURISY	FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	INFILTRATION OF LEUCOCYTES	INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)
1 1 1 1 1	2)3) GRADE									
	GROSS PATHOLOGICAL FINDINGS									
	ORGAN	HEART	THYMUS	SPLEEN	NASAL CAVITY	TRACHEA	LUNG	LIVER	PANCREAS	KIDNEYS
	4) DAYS	240								
	FATE	>-								

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ NODERATE +++ SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

CONTINUED 11-F1-1018 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

	1 1 1 1 1			! ! ! !		1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1018 Y	072	KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ +	
		UTERUS	NODULE	+	POLYP		
		PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE HYPERPLASIA OF CHROMOPHOBE CELLS	+ + + +	
		BONE (FEMUR)			OSTEOSCLEROSIS	+ + +	
		SKIN			INFILTRATION OF LEUCOCYTES	+	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR 'SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 	STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PÀTHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1019 Y	741	HEART		L.	FIBROSIS	+	NO SIGNIFICANT LESION
		THYMUS		x	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		8	BLOOD ABSORPTION	++	
		SPLEEN		тш,	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
		r un G		ΗO	HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+ +	
		PAROTID GLANDS		H	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER		ппы т	FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA	+ + + + + 0	
		KIDNEYS		Δ μ	PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			; ; ; ;			STUDY NO. 83004
ANIMAL 10 HUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	THOL		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1019 Y	741	KIDNEYS		1 1 1 1 1 1 1			
					CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	. + +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND			HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
		ADRENAL GLANDS			ANGIECTASIA (UNILATERAL)	++	
		BONE (FEMUR)			OSTEOSCLEROSIS	+ + +	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

) GRADE : NEGATIVE NO	+ \ SLIGHT	
DULE 2)		
KILLED ON SCHEDULE		
/ KILLED		
>-		
••		
FATE		
1		

4) DAYS : AFTER START OF TREATMENT

++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE NOT PRESENTED

APPENDIX 11-F1-1020

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJO THOLOGICAL FINDI	++ NO SIGNIFICANT LESION		+	+ +	+	+		+ + +			OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OB CEORDANIC	HEDIAL AND/OR SFORADIC LARGE AND/OR MULTIPLE
 	5	; ; ; ; ; ; ;	•	•	T T	T	+	CELLS +		+	+	GRADE OF A SMA	
	HISTOPATHOLOGICAL FINDINGS	FIBROSIS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	BLOOD ABSORPTION	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	INFILTRATION OF LEUCOCYTES	INFILTRATION OF LEUCOCYTES	FATTY DEGENERATION OF HEPATIC FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	INFILTRATION OF LEUCOCYTES (UNILATERAL)	INFILTRATION OF LEUCOCYTES	NOT PRESENTED 3)	
: : : : :	2)3) GRADE		_			-	I	E E S I	1 0 0 d	I		NEGATIVE NOT + SLIGHT ++ MODERATE	
	GROSS PATHOLOGICAL FINDINGS											2) GRADE:	+
	ORGAN	HEART	THYMUS	LYMPH NODES (PULM, HILUS)	SPLEEN	NASAL CAVITY	LUNG	LIVER	KIDNEYS	OVARIES .	UTERUS	KILLED ON SCHEDULE	ER START OF TREATMENT
 	4) DAYS	741										\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	: AFTER
! ! ! !	L 1) FATE	>-) FATE	4) DAYS
i i i i	ANIMAL NUMBER	1020										1 1	7

CONTINUED
11-F1-1020
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1	1 1 1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					STUDY NO. 83004
ANIMAL NUMBER	1) 4) FATE DAYS	4) DAYS	ORGAN	OSS PAT	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1020	> -	741	UTERUS		ŭ.	PIGMENTATION	+	
			PITUITARY GLAND	CYST	+	CYST MIGRATION OF HEMOSIDERIN-LADEN	. + +	
					<u>.</u>	CELLS HYPERPLASIA OF CHROMOPHOBE CELLS	++	
			THYROID GLANDS		_	HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			EYE BALLS		1	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN		T. I	PIGMENTATION HYPERPLASIA OF EPENDYMAL CELLS	+ +	
			SPINAL CORD		α.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

2

APPENDIX 11-F1-1021

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) FATE D NUMBER	4) DAYS	0RGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE OF DEATH OR PATHOLOGICAL
1021 Y 7	741	HEART				1	NO SIGNIFICANT LESION
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		SPLEEN		Ξ Ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESI	+ + + %	
		NASAL CAVITY		Ħ	INFILTRATION OF LEUCOCYTES	+ + +	
		LARYNGOPHARYNX		I	INFLAMMATION	+++	
		r un G		20	CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	ALL +	
		STОМАСН		Ï	HEMORRHAGE	+	
		PAROTID GLANDS		î	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		LIVER		A T S S S S S S S S S S S S S S S S S S	FATTY DEGENERATION OF HEPATIC INFILTRATION OF LEUCOCYTES CHOLANGIOFIBROSIS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELL'S MACROPHAGE MIGRATION IN PERIVASCULAR AREA	TIC CELLS + + + + + + + + + + + + + + + + + +	
		PANCREAS		NI	INFILTRATION OF LEUCOCYTES	+	
	:	KIDNEYS			LCIFICATION (+	
1) FATE:	> -	ON SCHEDUL	E 2) GRADE :	NEGATIVE NOT + SLIGHT	NOT PRESENTED 3)	GRADE OF MA	
4) DAYS :	AFTER	R START OF TREATMENT			- <u>-</u> -	/ MEDIAL	. AND/OR SPURADIC AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED 11-F1-1021 APPENDIX

i de ņ CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

			1 1 1	. 10DY NO. 83004		SIUDY NO. 83004
ANIMAL 1) 4) NUMBER	4) ORGAN DAYS	GROSS PATHOLOGIC FINDING	2)3) GRADE	AL 2)3) HISTOPATHOLOGICAL 2) PROBABLE CAUSES GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1021 Y 741 KIDNEYS	KIDNEYS					

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	1												
2) GRADE	! ! ! !	+	+	+	++	+	+	+	+	+ + +	+ +	+	+
) HISTOPATHOLOGICAL FINDINGS		INFILTRATION OF LEUCOCYTES (BILATERAL)	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	PIGMENTATION (BILATERAL)	HEMORRHAGE	PIGMENTATION	MIGRATION OF HEMOSIDERIN-LADEN	VELLS HYPERPLASIA OF CHROMOPHOBE CELLS	HYPERPLASIA OF C-CELLS (UNILATERAL)	ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	OSTEOSCLEROSIS	PIGMENTATION	PIGMENTATION
2)3) GRADE	! ! ! ! !					•							
GROSS PATHOLOGICAL FINDINGS													
ORGAN	KIDNEYS				URINARY BLADDER	UTERUS	PITUITARY GLAND		THYROID GLANDS	ADRENAL GLANDS	BONE (FEMUR)	BRAIN	SPINAL CORD
4) DAYS	741												
1) ATE	>-												

2) GRADE : NEGATIVE NOT PRESENTED	+ , SLIGHT	++ / MODERATE	+++ SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

11-F1-1022 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

			! ! ! !		1 1 1	\$0000 · 02 - 00 - 0
ARIMAL 1) 4) FATE DAYS HUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1022 Y 741	HEART		u.	FIBROSIS	+ +	FIBROADENOMA: MAMMARY
	THYMUS		Ι.	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
	LYMPH NODES		ш.	BLOOD ABSORPTION	+ + +	
	(PULM.HILUS) SPLEEN		Σ W	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	÷ + +	
	NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+++	
	LARYNGOPHARYNX		u.	FOREIGN BODY GRANULOMA	+	
	TRACHEA		I	INFILTRATION OF LEUCOCYTES	+	
	Гимб		00#	OSSEOUS TISSUE CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS	+ + +	
	PAROTID GLANDS		I R	INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	+ +	
	LIVER		π ω Σ	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + «	
					1	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

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CONTINUED
11-F1-1022
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

			1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS HUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1022 Y 741	LIVER				; ; ; ; ; ; ;	
			LIT	FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES HYPERPLASTIC NODULE	. + + +	
	PANCREAS		Ą	ATROPHY OF PANCREATIC ACINUS INFILTRATION OF LEUCOCYTES	+ +	
	KIDNEYS		C C	PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + +	
	UTERUS		40	PIGMENTATION DILATATION OF DUCT	+ +	
	SKIN		I	INFILTRATION OF LEUCOCYTES	. +	
	MAMMARY GLAND	MASS	C	FIBROADENOMA		
	BRAIN		a.	PIGMENTATION	+	
	SPINAL CORD		۵	PIGMENTATION	+	

GRADE	
5)	
SCHEDULE	
NO	
KILLED	
`	
>	
••	
FATE	
1)	

4) DAYS : AFTER START OF TREATMENT

÷2.

²⁾ GRADE: NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

APPENDIX 11-F1-1023

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) NUMBER FATE DAYS	ORGAN S	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	10L0G	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1023 Y 741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FIBROADENOMA: MAMMARY
	HEART			INFILTRATION OF LEUCOCYTES	+	
	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
	SPLEEN	ENLARGEMENT	+ + +			,
	NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
	STOMACH		_	DILATATION OF GASTRIC FAVEOLAE	+	
	SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
	SUBLINGUAL GLANDS		,	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
	PAROTID GLANDS		ŭ.	REGENERATIVE CHANGE (UNILATERAL)	+	
	LIVER	ROUGHNESS OF SURFACE	+ + + +	FATTY DEGENERATION OF HEPATIC CE SMALL GRANULOMA EXTRAMEDULLARY HEMATOPOIESIS FOCAL ATROPHY OF HEPATIC CELLS	CELLS + + + + + + + + + + + + + + + + + +	
	PANCREAS		I	INFILTRATION OF LEUCOCYTES	+	
	KIDNEYS			RONIC PROGRESSIVE LOMERULONEPHROPATHY (BILATER	+	
1) FATE : Y 4) DAYS : AF	Y , KILLED ON SCHEDULE AFTER START OF TREATMENT	2) GRADE	. NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED 3) GRA A CC	DE OF MASS: SMALL AND/OR MEDIAL AND/OR LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR .MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

CONTINUED 11-F1-1023 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	7	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	(2)	PROBABLE CAUSE
FATE D NUMBER	OAYS		FINDINGS	GRADE	FINDINGS	GRADE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1023 Y 7	741	KIDNEYS			INFILTRATION OF LEUCOCYTES	+	
			 ·		(BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	
		OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		UTERUS			PIGMENTATION INFILTRATION OF LEUCOCYTES	+ +	
	-	PITUITARY GLAND HEMORRHAGE	HEMORRHAGE	+	MIGRATION OF HEMOSIDERIN-LADEN	+	
					HYPERPLASIA OF CHROMOPHOBE CELLS	++	
		MAMMARY GLAND	MASS	Ą	FIBROADENOMA		
	-	HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN			PIGMENTATION	+	
	•	SPINA! COBD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

·

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE: Y , KILLED ON SCHEDULE

APPENDIX 11-F1-1024

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! ! !			1		1	STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) 0AYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1024 Y	741	неакт			FIBROSIS	+	ADENOMA: PITUITARY GLAND
		THYMUS		_	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	C-CELL ADENOMA: IHYROID GLANDS ADENOCARCINOMA: UTERUS
		LYMPH NODES			BLOOD ABSORPTION	+++	
		(PULM.HILUS) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			INFILTRATION OF LEUCOCYTES	+	
		LIVER		u 0, u u 2	PROLIFERATION OF BILE DUCT WITH FIBROSIS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ ++++	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +++	
		UTERUS	MASS	U	HEMORRHAGE	+ + +	

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11-F1-1024	
PPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 			; ; ; ; ;		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1024 Y	741	UTERUS	HEMORRHAGE	+	ADENOCARCINOMA		
		PITUITARY GLAND			ADENOMA		
		THYROID GLANDS			C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	
		MAMMARY GLAND			HYPERPLASIA	+	
		HARDERIAN GLANDS	10		INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN		,	PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	TH9118 , +
Y , KILLED ON SCHEDULE	GR	
` -	5	
	` `~	

+ , SLIGHI ++ , MODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT

11-F1-1025 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

	; ; ; ; ;			1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	O R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	
1025 Y	741	HEART			FIBROSIS	+	A: P
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+ +	
		SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX		_	INFLAMMATION HYPERSECRETION	+ + + +	
		SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER	YELLOWISH CHANGE	+	FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + + + S	
		PANCREAS		I	ATROPHY OF PANCREATIC ACINUS INFILTRATION OF LEUCOCYTES	+ +	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	. +	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ +	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++, NODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

CONTINUED
11-F1-1025
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		. !	STUDY NO. 83004
ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1025 Y	741	KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (RILATERAL)	+ +	
					CALCIFICATION (BILATERAL)	+ .	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + +	AD ENOMA		
		ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES	+	
					VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	,+	
		MAMMARY GLAND			HYPERPLASIA	+	
		BRAIN	IMPRESSION	+	HEMORRHAGE Pigmentation	+ +	
		SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , NODERATE +++ , SEVERE

11-F1-1026 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

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		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	STUDY NO. 83004
ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
			INFILTRATION OF LEUCOCYTES	+	LL ADENOMA: T
			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS
LYMPH NODES			BLOOD ABSORPTION	+	
SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+++	
LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
ТRАСНЕА		.,	INFILTRATION OF LEUCOCYTES	+	
		7001	INFILTRATION OF LEUCOCYTES OSSEOUS TISSUE CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS	+ + + +	
SТОМАСН		J	DILATATION OF GASTRIC FAVEOLAE	+	
SUBLINGUAL GLANDS		<u>.</u>	HYPERPLASIA OF DUCTAL EPITHELIUM (UNILATERAL)	+ +	
		ш.	FOCAL ATROPHY OF HEPATIC CELLS	+	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

CONTINUED	
11-F1-1026	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) AUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRĄDE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1026 Y	741	LIVER			INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC SMALL GRANULOMA	IC CELLS +	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILA PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	(BILATERAL) AL) + CYTES + RAL) +	
		OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	++	
		UTERUS			PIGMENTATION	+	
		THYROID GLANDS	NODULE (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL) HEMORRHAGE (UNILATERAL) MIGRATION OF HEMOSIDERIN-LADEN CELLS (UNILATERAL)	LATERAL) + , ,DEN +	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASIA OF GLANDULAR EF CELLS (UNILATERAL)	S EPITHERIAL +	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	
1) FATE		Y , KILLED ON SCHEDULE AFTER START OF TREATMENT	ULE 2) GRADE TMENT	: NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED	3) GRADE OF MASS A SMALL ANG B MEDIAL ANG	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

11-F1-1027 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1			1 1 1 1 8 8		! ! ! ! !	STUDY NO. 83004
ANIMAL 1) NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1027	W 645	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUXEMIA
		HEART			FIBROSIS	+	
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN	ENLARGEMENT	+ +	HEMOSIDEROSIS	+	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
		MASAL CAVITY			INFLAMMATION	++	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	+	
		PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER	ROUGHNESS OF SURFACE		MACROPHAGE MIGRATION	+ +	
			TELLOWING CHANGE	++++	IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA EXTRAMEDULLARY HEMATOPOIESIS	+ + + + 0	
		PANCREAS		7	ATROPHY OF PANCREATIC ACINUS	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT

1) FATE: W KILLED IN EXTREMIS

CONTINUED
11-F1-1027
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

FINDINGS FINDINGS GRADE	FATE DAYS FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE CHRONIC PROGRESSIVE THYROID GLANDS THYROID GLANDS HYPERPLASIA OF NUCOSAL EPITHELIUM ++ HYPERPLASIA OF C-CELLS (UNILATERAL) + HYPERPLASIA OF LEUCOCYTES + HYPERPLASIA OF LEUCOCYTES + HYPERPLASIANO F LEUCOCYTES + HY	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1	1		; ; ; ; ;				; ; ; ;	STUDY NO. 83004
W 645 KIDNEYS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) BRAIN SPINAL CORD PIGMENTATION PIGMENTATION PIGMENTATION PIGMENTATION	W 645 KIDNEYS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) VAGINA THYROID GLANDS HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) HARDERIAN GLANDS (UNILATERAL) BRAIN MASS A MEDULLOBLASTOMA PIGMENTATION PIGMENTATION PIGMENTATION PIGMENTATION PIGMENTATION PIGMENTATION	1	1) TE D	4) AYS	ORGAN	GR0SS	PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
(BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION	(BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION				KIDNEYS			0 1	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION	PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION							J	(BILATERAL) ;ALCIFICATION (BILATERAL)	. +	
NDS HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION	HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION				UTERUS			a,) I G M E N T A T I O N	+	
HYPERPLASIA OF C-CELLS (UNILATERAL) LANDS INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION	HYPERPLASIA OF C-CELLS (UNILATERAL) LANDS INFILTRATION OF LEUCOCYTES (UNILATERAL) A MEDULLOBLASTOMA PIGMENTATION			•	VAGINA			エ	YYPERPLASIA OF MUCOSAL EPITHELIUM	÷ +	
LANDS (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION	INFILTRATION OF LEUCOCYTES (UNILATERAL) MASS A MEDULLOBLASTOMA PIGMENTATION				THYROID GLANDS			工	HYPERPLASIA OF C-CELLS (UNILATERAL)		
MASS A MEDULLOBLASTOMA PIGMENTATION	MASS A MEDULLOBLASTOMA PIGMENTATION			-	HARDERIAN GLANDS			I	NFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
PIGMENTATION	PIGMENTATION			_	BRAIN	MASS			IEDULLOBLASTOMA		
					SPINAL CORD			<u>а</u>	'IGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F1-1028

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

; ; ; ; ; ; ; ; ; ; ; ; ;	1			 			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUS OF DEATH OR MAJ THOLOGICAL FIND
1028 W	687	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
		HEART			FIBROSIS	+	: MULTIPLE ORGANS POLYP: UTERUS
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
		SPLEEN	ENLARGEMENT	+ + +			
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		רחאפ	НЕМОКВНАGE	+	CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS HEMORRHAGE	+ + +	
		LIVER	ROUGHNESS OF SURFACE	+ + +	PROLIFERATION OF BILE DUCT WITH FIBROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
					MACROPHAGE MIGRATION IN PERIVASCULAR AREA HEMORRHAGE	+ +	
		KIDNEYS			CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + + +	
		UTERUS			IGMENTATION	+	
1) FATE 4) DAYS	!	W. KILLED IN EXTREMIS AFTER START OF TREATMENT	2) GRADE	1 Z + + + + + + + + + + + + + + + + + +	PRESENTED 33.	GRADE OF MASS: SMALL AND/OR MEDIAL AND/OR C / LARGE AND/OR	OF MASS: OF MASS: MEDIAL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED
11-F1-1028
APPENDIX

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CHRONIC AND CARCINOGÉNIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

! ! ! ! !	1	1			1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS HUMBER	1) ATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HOLOGIC	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1028	3	687	UTERUS			POLYP		
			PITUITARY GLAND	HEMORRHAGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + + +	
			THYROID GLANDS		_	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			HEMORRHAGE (BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ +	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD		-	PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : W / KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			 		! ! ! ! !	STUDY NO. 83004
ANIMAL 1) HUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1029 Y	741	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GRANULOSA-THECA CELL TUMOR: OVARIES
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + +	
		BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS ADENOMATOSIS	+ + +	
		LIVER	NODULE	+	SMALL GRANULOMA MACROPHAGE MIGRATION	+ +	
					IN PERIVASCULAK AREA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS	+ + +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	++	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CONTINUED	
11-F1-1029	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL NUMBER

1029

							STUDY NO. 83004
1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) DE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
: : : :	741	KIDNEYS				-	
					PIGMENIALION (BILAIERAL) INFILTRATION OF LEUCOCYTES	+ + +	
				•	(BILATERAL) CALCIFICATION (UNILATERAL)	+	
		OVARIES		-	GRANULOSA-THECA CELL TUMOR (UNILATERAL)		
		UTERÜS			PIGMENTATION	+	
		VAGINA			HYPERPLASIA OF MUCOSAL EPITHELIUM	+	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	ADENOMA		
		MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
		BRAIN		-	PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+; SLIGHT
++, MODERATE
+++, SEVERE

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2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , HODERATE
+++ , SEVERE

11-F1-1030 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1	! ! !	1			 		1 1 1 1 1	STUDY NO. 83004
ANIMAL RUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1030	> -	272	HEART		ŭ.	FIBROSIS	+	C-CELL ADENOMA: THYROID
			THYMUS		-i-	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS ADENOMA: PITUITARY GLAND
			LYMPH NODES		ш	BLOOD ABSORPTION	+	
			(PULM.HILUS) SPLEEN		1	HEMOSIDEROSIS	+ + +	
			BONE MARROW		ŭ.	PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
			rung		7	CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	+ +	
			STOMACH		۵	DILATATION OF GASTRIC FAVEOLAE	+	
			SUBMAXILLARY GLANDS		I	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			PAROTID GLANDS		I	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER		u.	FOCAL ATROPHY OF HEPATIC CELLS	++	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

1	1 1 1	; ; ;			! ! ! ! !			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1030	>-	272	LIVER			SMALL GRANULOMA	; ; ; ; ; ; ; ; ; ;	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +++	
			UTERUS			PIGMENTATION INFILTRATION OF LEUCOCYTES	+ +	
			PITUITARY GLAND	HEMORRHAGE	+	CYST ADENOMA	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL) GRAYISH CHANGE (UNILATERAL)	+ +	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+ +	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN		ŭ.	PIGMENTATION	+	,

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

			1 1 1			STUDY NO. 83004
ANIMAL 1) 4) RUMBER FATE DAYS	45 ORGAN 45	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1031 Y 742	2 HEART		•	FIBROSIS	+	C-CELL ADENOMA: THYROID
	THYMUS		x	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS FOLLICULAR ADENOMA : THYROID GLANDS
	LYMPH NODES (PULM.HILUS)		В	BLOOD ABSORPTION	+	
	SPLEEN		x	HEMOSIDEROSIS	++	
	BONE MARROW		I	INCREASE OF GRANULOCYTES	+++	
	NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	. +	
	L UNG		C	INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ +	
	ILEUM		Ī	INFLAMMATION	+ + +	
	LIVER		I I	INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS	+ +	
	PANCREAS		E	FIBROSIS	+	
	KIDNEYS		I	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILITAATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	+ + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1	1						STUDY NO. 83004
ANIMAL HUMBER	1) FATE DA	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	TOPATHOLOGICAL FINDING	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1031	7.2 ×	2	KIDNEYS		1 1 1 1 1 1	CALCIFICATION (UNILATERAL)	; ; ; ; ; ; ; ; ;	
		J	OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	++	
		_	UTERUS			PIGMENTATION	+	
		1	THYROID GLANDS			FOLLICULAR ADENOMA (UNILATERAL) C-CELL ADENOMA (UNILATERAL)		
		<u> </u>	HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		u	BRAIN			PIGMENTATION	+	
		0,	SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

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2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

APPENDIX 11-F1-1032

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) FATE D/ NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	TOPATHOLOGIC FIND	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1032 Y 74	272	THYMUS		Ξ	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NO SIGNIFICANT LESION
		LYMPH NODES		A	ANGIECTASIA	+	
		SPLEEN		Η Ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
		LUNG		I	INFILTRATION OF LEUCOCYTES	+	
		PAROTID GLANDS		œ	REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER		S	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ + +	
		KIDNEYS		1 0 E 6	INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) GLOMERULOSCLEROSIS (BILATERAL) PIGMENTATION (BILATERAL)	+ ++ + +	
				ñ .	URINE CAST (BILATERAL)	+	
		UTERUS		م.	PIGMENTATION	+	

CONTINUED
11-F1-1032
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

ANIMAL 1) 4) FATE DAYS NUMBER	ORGAN SS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
; ; ; ;	UTERUS				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PAIHOLOGICAL FINDINGS
			ix —	HYPERPLASIA OF ENDOMETRIAL EPITHELIUM	+ +	
	EYE BALLS		Ö	CALCIFICATION, SCLERA (UNILATERAL)		
	BRAIN		هـ	PIGMENTATION	+	
	SPINAL CORD		۵	PIGMENTATION	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFIER START OF TREATMENT

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APPENDIX 11-F1-1033

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1	1 1 1			1 1 1 1 1 1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE DA	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1033	W 71	715 MI	MULTIPLE ORGANS					ADEN
		Ĭ	HEART			FIBROSIS	+	GLANDS MONONUCLEAR CELL LEUKEMIA
		Ë	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
		َ ب	LYMPH NODES	ENLARGEMENT	+			. •
		S	SPLEEN SPLEEN	ENLARGEMENT	+ + +	HEMOSIDEROSIS	+	
		Ñ	NASAL CAVITY			INFLAMMATION	+ +	
		ה	LUNG	HEMORRHAGE	+	HEMORRHAGE HISTIOCYTOSIS	+ +	
		đ	PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	NODULE	+	FIBROSIS	+	
		Ρβ	PANCREAS			FIBROSIS	+	
		<u>~</u>	KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (UNILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	+ + + + .	
		7 0	OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	+	
1) 6	FATE:	W	CLED IN EXTREMI	2) GRADE ENT	. NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED 3)	GRADE OF MASS: A SMALL AND/OR B MEDIAL AND/OR C LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED 11-F1-1033 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

1 1 1	1 1 1 1	1						STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GICAL	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	 2) GRADE	1
1033	3	W 715	UTERUS			TION	! ! ! ! ! ! ! ! !	1
			THYROID GLANDS		J	C-CELL ADENOMA (UNILATERAL)	,	
			EYE BALLS		S	CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS		I	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN		α.	PIGMENTATION	+	
			SPINAL CORD		а.	PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F1-1034

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	: ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 			STUDY NO. 83004
ANIMAL 1) HUMBER) 4) E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1034 Y	272	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA	; ; ; ; ;	ADENOMA: PITUITARY GLAND
		HEART			FIBROSIS	+	MONONUCLEAR CELL LEUXEMIA : MULTIPLE ORGANS
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS		
		LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION	+	
		SPLEEN	ENLARGEMENT	+	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ +	
		NASAL CAVITY		•	INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		FUNG			CALCIFICATION OF VASCULAR WALL	+	
		LIVER	NODULE	+	INFILTRATION OF LEUCOCYTES SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA CHOLANGIOFIBROSIS	+ + + + + +	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ +	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE: Y , KILLED ON SCHEDULE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

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ANIMAL 1) RUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1034 Y 7	272	KIDNEYS					
					INFILTRATION OF LEUCOCYTES	+	
					(BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ +	
		URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
		UTERUS		-	PIGMENTATION	+	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + +	ADENOMA		
		THYROID GLANDS		-	HYPERPLASIA OF C-CELLS (BILATERAL)	+	
		ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		MAMMARY GLAND		1	INFILTRATION OF LEUCOCYTES	+	
		HARDERIAN GLANDS		1	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN	· .		PIGMENTATION	+	
		SPINAL CORD		ŭ.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

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APPENDIX 11-F1-1035

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ARIMAL 1) PATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1035 Y	272	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		EMI.
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES (SUBMAXI.) SPLEEN	ENLARGEMENT	+ + +	INCREASE OF PLASMA CELLS	+	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	÷ ÷	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	+	
		SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER	ENLARGEMENT REDDISH CHANGE	+ + +			
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	AL) + + + + + + + + + + + + + + + + + + +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND			CYST	+	
1) FATE		XILLED ON SCHEDULE	11E 2) GRADE	EG.	NOT PRESENTED 3)	GRADE OF MASS A SMALL ANI B MEDIAL A	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
4) DAYS	••	AFTER START OF TREATMENT	MENI	+++ SEV	FKE	`	D/OK MULIFLE

CONTINUED 11-F1-1035 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX :

O PPM FEMALE

	1 1 1 1	! ! !			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) TE DA	4) AYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	89	2) GRADE	SE JOR DINGS
						! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	1 1 1 1 1 1 1	
1035	Y 74.	242	THYROID GLANDS		工	HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	
			MAMMARY GLAND		x	HYPERPLASIA	+	
			BRAIN		a	PIGMENTATION	+	

PIGMENTATION

SPINAL CORD

2) GRADE : NEGATIVE NOT PRESENTED 1) FATE: Y XILLED ON SCHEDULE

+ / SLIGHT ++ / MODERATE +++ / SEVERE

4) DAYS : AFIER START OF TREATMENT

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APPENDIX 11-F1-1036

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

	; ; ; ;			: : : : :			STUDY NO. 83004
ANIMAL 1) HUMBER	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1036 W	769	HEART			HYPERPLASIA OF ENDOCARDIAL C	CELLS +	ERUS
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	SQUAMOUS CELL CARCINOMA : TONGUE
		LYMPH NODES	ENLARGEMENT	+			
		(SPLEEN			HEMOSIDEROSIS	++	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	++	
		TONGUE	ABSCESS	+	SQUAMOUS CELL CARCINOMA		
		SUBMAXILLARY			ATROPHY OF ACINAR CELLS (BIL)	(BILATERAL) +++	
		SUBLINGUAL			ATROPHY OF ACINAR CELLS (BILA	(BILATERAL) +++	
		GLANDS PAROTID GLANDS			VACUOLAR DEGENERATION (BILATERAL)	+	
		LIVER	NODULE	+ +	FATTY DEGENERATION OF HEPATIC SMALL GRANULOMA NACROPHAGE MIGRATION IN PERIVASCULAR AREA	CELLS +++	
					CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILAT	+	
1) FATE	!	LLLEDIN	2) GRADE	EGA .	PRESENTED 3)	GRADE OF MASS : SMALL AND/OR B , MEDICAL AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
4) DAYS	S : AFIEK	ER SIARI UF IREAIMENI		+++ > >EV	ה ק ח		ND/OK MULIIPLE

CONTINUED 11-F1-1036 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1 1 1			1 1 1 1 1 1		! ! ! ! !	STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN 1	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1036 M	769	KIDNEYS			CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	. + + +	
		OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	
		UTERUS			POLYP PIGMENTATION	+	
		VAGINA	ENLARGEMENT	+	INFILTRATION OF LEUCOCYTES	+	
		PITUITARY GLAND	REDDISH CHANGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS	+	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE: W , KILLED IN EXTREMIS

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

11-F1-1037 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	! ! ! !			1			STUDY NO. 83004
ANIMAL 1) NUMBER NUMBER	4) DAYS	1	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBA OF DEAT
1037 W	721	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND
		ABDOMINAL CAVITY HEMORRHAGE	Y HEMORRHAGE	+			MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
		HEART			FIBROSIS	+	
		THYMUS			АТКОРНУ	+ + +	
		SPLEEN	ENLARGEMENT	+ + +			
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
		LUNG	HEMORRHAGE	+ + +	HEMORRHAGE	+	
		SUBMAXILLARY GLANDS			GRANULATION (UNILATERAL)	+	
		LIVER	ROUGHNESS OF SURFACE	++	SMALL GRANULOMA FOCAL NECROSIS	+ +	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+ ++	
		UTERUS	ENLARGEMENT	+ +	PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE: W , KILLED IN EXTREMIS

+ / SLIGHT ++ / MODERATE +++ / SEVERE

2) GRADE : NEGATIVE NOT PRESENTED

CONTINUED	
11-F1-1037	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ;	1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) ATE [4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1037	Δ.	721	UTERUS			DILATATION OF DUCT		
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	(AL) +	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			HEMORRHAGE PIGMENTATION	+ + +	
			SPINAL CORD			PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT + + , MODERATE + + + , SEVERE 1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

11-F1-1038 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE M P P M LEVEL AND SEX :

; ; ; ; ; ; ; ; ;	1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		; ; ; ; ; ; ; ;	STUDY NO. 83004
ANIMAL 1) HUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1038 Y	242	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
		HEART			FIBROSIS	+	: MULTIPLE ORGANS
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN	ENLARGEMENT	+ +	HEMOSIDEROSIS	+	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG			HISTIOCYTOSIS HEMORRHAGE	+ +	
		PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER	ENLARGEMENT	÷ ,	SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA HYPERPLASTIC NODULE	+ + +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	++ sn	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BIL	+ (BILATERAL)	•
1) FATE 4) DAYS	E : Y . KI	KILLED ON SCHEDULE ER START OF TREATMENT	2) GRADE	NEGATIVE N + SLIGHT ++ MODERA ++ SEVERE	ATIVE NOT PRESENTED SLIGHT MODERATE SEVERE	3) GRADE 3) GRADE 8 (OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED APPENDIX 11-F1-1038

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1038 Y	242	KIDNEYS				1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
·					PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ + +	
				Š	(UNICATERAL) CALCIFICATION (BILATERAL)	+	
		URINARY BLADDER		•	INFILTRATION OF LEUCOCYTES	+	
		UTERUS		T 71	PIGMENTATION INFILTRATION OF LEUCOCYTES	+ +	
		PITUITARY GLAND		-1-	HYPERPLASIA OF CHROMOPHOBE CELLS	+ +	
		PARATHYROID GLANDS		-1-	HYPERPLASIA OF CHIEF CELLS (UNILATERAL)	+ +	
		ADRENAL GLANDS		4 >	ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ +	
		BONE (FEMUR)		I	HYPEROSTOSIS	+ +	
		BRAIN		ď	PIGMENTATION	+	
		SPINAL CORD		a.	PIGMENTATION	+	

3) GRADE OF MASS:	A > SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C . LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ \ SLIGHT	++ / MODERATE	+++ SEVERE
1) FAIE : Y / KILLED UN SCHEDULE	•		4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

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SEX	
AND	
LEVEL	

STUDY NO. 83004

ANIMAL 1) NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE	0 PATHO	ROBABLE CAUSE DEATH OR MAJOR
1039 Y	742	LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ ++ + SI	FIBROADENOMA: MAMMARY GLAND	MAMMARY GLAND
		NASAL CAVITY			INFILTRATION OF, LEUCOCYTES	+		
		LUNG			HISTIOCYTOSIS ADENOMATOSIS CALCIFICATION OF VASCULAR WALL	WALL +		
:		LIVER			FATTY DEGENERATION OF HEPATIC FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS	ATIC CELLS + CELLS + +		5.
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BIL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	(BILATERAL) CYTES + AL) +		
		UTERUS			PIGMENTATION .	*		
		VAGINA		[INFILTRATION OF LEUCOCYTES	*	ı	
		ADRENAL GLANDS		±	HYPERPLASIAOF GLOMERULOSA (UNILATERAL)	CELLS +		
		SKIN (SUBCUTIS)		ſ	INFILTRATION OF LEUCOCYTES	+		
1) FÁTE	TE: Y	KILLED ON SCHEDULE	2) GRADE	NEGATIVE N	NOT PRESENTED	40E	S: ND/OR SINGULAR	
4) DAYS	••	AFTER START OF TREATMENT		++ , MODERA +++ , SEVERE	MODERATE Severe	B / MEDIAL C / LARGE A	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE	

CONTINUED	COLOGICAL STUDY	
11-F1-1039	INHALATION TOXICOLOGICAL	IN FISCHER RAT
APPENDIX	CHRONIC AND CARCINOGENIC	OF METHANOL
	AND	
	CHRONIC	

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE о РРМ LEVEL AND SEX :

1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! ! !			 		 	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	O R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1039	>-	272	MAMMARY GLAND	MASS	8	FIBROADENOMA		
			EYE BALLS		J	CALCIFICATION, SCLERA (UNILATERAL)	+	·
			HARDERIAN GLANDS		I	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN		Δ.	PIGMENTATION	+	
			SPINAL CORD		۵	PIGMENTATION	+	

1) FATE: Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL	NO SIGNIFICANT LESION									
	2) GRADE	+	+	+ + + +	+	+	+	+	+	+ + + +	+ +
)3) HISTOPATHOLOGICAL DE FINDINGS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	BLOOD ABSORPTION	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	PROLIFERATION OF RETICULAR CELLS	INFILTRATION OF LEUCOCYTES	HYPERSECRETION	INFILTRATION OF LEUCOCYTES	REGENERATIVE CHANGE (UNILATERAL)	FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)
! ! ! !	2)3) GRADE	 									
	GROSS PATHOLOGICAL FINDINGS										·
	0 R G A N	THYMUS	LYMPH NODES (PULM.HILUS)	SPLEEN	BONE MARROW	NASAL CAVITY	LARYNGOPHARYNX	LUNG	PAROTID GLANDS	LIVER	KIDNEYS
; ; ; ;	4) DAYS	743						_			<u>x.</u>
1	1) FATE	>-									
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ANIMAL NUMBER	1040									

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

CONTINUED
11-F1-1040
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1			 			STUDY NO. 83004
ANIMAL 1) NUMBER	1) TE (4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1040	· -	743	KIDNEYS			A CATAL TANGENT A LEGY MOTTATION OF THE LEGY MOTION	1 1 1 1 1 1 1	
						FIGHENIALION (BILATERAL)	+	
			UTERUS			PIGMENTATION		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN FELLS	+ +	
					•	HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			SKIN	MASS	A	EPIDERMOID CYST	++	
			EYE BALLS		_	CALCIFICATION, SCLERA (UNILATERAL)	+	
			BRAIN		_	PIGMENTATION	+	
			SPINAL CORD		~-	PIGMENTATION	. +	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

11-F1-1041 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1	1	1			 			STUDY NO. 83004
ANI MAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1041	×	687	THORACIC CAVITY	THORACIC CAVITY PLEURAL FLUID (BLOODY) +	+			PHEOCHROMOCYTOMA: ADRENAL
			HEART		u.	FIBROSIS	+	GLANDS
			SPLEEN		Ι	HEMOSIDEROSIS	++	
			NASAL CAVITY		H	INFILTRATION OF LEUCOCYTES	+	
			LUNG		00	CALCIFICATION OF VASCULAR WALL CONGESTIVE EDEMA	+ +	
			LIVER		Sυ	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+ +	
			KIDNEYS		н борк	INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) URINE CAST (UNILATERAL) REGENERATIVE RENAL TUBULE	+ ++++	
			ADRENAL GLANDS	MASS (UNILATERAL)	a a	(BILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)		
			BRAIN		۵	PIGMENTATION	+	
			SPINAL CORD		<u>a</u> ,	PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE 4) DAYS : AFIER START OF TREATMENT 1) FATE : X , FOUND DEAD

11-F1-1042 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE LEVEL AND SEX :

ANIMAL 1) 4) ORGAN GROSS F NUMBER 1042 Y 743 HEART THYMUS SPLEEN BONE MARROW NASAL CAVITY LUNG LIVER KIDNEYS					
7 743	PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	RO DE
SPLEEN BONE MARROW NASAL CAVITY LUNG LIVER KIDNEYS		4	FIBROSIS	 	POLYP: UTERUS
BONE MARROW NASAL CAVITY LUNG LIVER KIDNEYS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FIBROADENOMA: MAMMARY GLAND C-CELL ADENOMA: THYROID
BONE MARROW NASAL CAVITY LUNG LIVER KIDNEYS		Ξ Ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	GLANDS ASTROCYTOMA: BRAIN
NASAL CAVITY LUNG LIVER KIDNEYS		۵.	PROLIFERATION OF RETICULAR CELLS	+	
LIVER		I	INFILTRATION OF LEUCOCYTES	+	
LIVER		H	HISTIOCYTOSIS	+	
KIDNEYS		попε	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + +	
		0 401	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +++	
OVARIES CYST (UN	CYST (UNILATERAL)	+ F(FOLLICULAR CYST (UNILATERAL)	++	
UTERUS MASS		<u>а.</u>	PIGMENTATION	+	
1) FATE: Y , KILLED ON SCHEDULE	2) GRADE :		NOT PRESENTED 3) GRADE	OF MASS:	:
4) DAYS : AFTER START OF TREATMENT	T ‡	++ / MODERATE +++ / SEVERE	: m U	EDIAL AN	α

CONTINUED 11-F1-1042 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ; ;	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1			STUDY NO. 83004
ANIMAL 1)	(7)	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	2)	PROBABLE CAUSE
NUMBER			FINDINGS	GRADE	FINDINGS	GRADE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1042 Y	743	UTERUS					
				•	POLYP		
		THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL)		
		ADRENAL GLANDS			ANGIECTASIA (BILATERAL)	+	
		MAMMARY GLAND	MASS	ပ	FIBROADENOMA		
		EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+ + + +	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+ + + + + +	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN			ASTROCYTOMA PIGMENTATION	+	
		SPINAL CORD		<u></u>	PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

+5 .j+5

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2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

APPENDIX 11-F1-1043

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMAL

				1		1	STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1043 W	708	MULTIPLE ORGANS	YELLOWISH CHANGE	+	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
		HEART			ENDOCARDITIS	+	: MULTIPLE ORGANS
		LYMPH NODES	ENLARGEMENT	+			
		SPLEEN	ENLARGEMENT	+ + +			
		LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+ +	
		PAROTID GLANDS			ATROPHY OF ACINAR CELLS (UNILATERAL	+	
		LIVER	ENLARGEMENT ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ + +	PIGMENTATION	+	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGNENTATION (BILATERAL)	+ + + + + +	
		PITUITARY GLAND	HEMORRHAGE ENLARGEMENT 	. + +	MIGRATION OF HEMOSIDERIN-LADEN CELLS HEMORRHAGE	+ +	
		BONE (FEMUR)			OSTEOSCLEROSIS	+	

11-F1-1044 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM LEVEL AND SEX :

FEMALE

1	1 1 1	1 1 1 1 1			; ; ; ;		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1044	×	636	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			ABDOMINAL CAVITY	ABDOMINAL CAVITY ASCITES (BLOODY)	+ + +			: MULTIPLE ORGANS FIBROADENOMA: MAMMARY
			HEART			FIBROSIS	+	GLAND
			SPLEEN	ENLARGEMENT	+ + +			
			LIVER	NODULE	+			
			PITUITARY GLAND			HEMORRHAGE	+	
			MAMMARY GLAND	MASS	A	FIBROADENOMA		

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : X , FOUND DEAD

4) DAYS : AFTER START OF TREATMENT

11-F1-1045 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ;	1 1 1 1			; ; ; ; ; ;		! ! ! !	STUDY NO. 83004
ANIMAL 1) NUMBER	1) ATE D	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1045	3	572	ABDOMINAL CAVITY ASCITES	/ ASCITES	+ + +			MESOTHELIOMA: PERITONEUM
			PERITONEUM	NODULE	+ + +	MESOTHELIOMA		אטראטייאי דויטוייא פראאט
			SPLEEN			EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			STOMACH			ULCER	+ +	
			LIVER	DISCOLORATION	+ + +	FATTY DEGENERATION OF HEPATIC CELLS ++	+ + S	
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+	PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	÷ ÷ + +	
			PITUITARY GLAND	HEMORRHAGE	+++	ADENOMA		
			BONE (FEMUR)			OSTEOSCLEROSIS	++	
			BRAIN			PIGMENTATION	+	

A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS: 2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

11-F1-1046 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

; ; ; ; ;	 	! ! !			† ! ! ! !			STUDY NO. 83004
ANIMAL 1) FATE NUMBER		4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1046	>-	243	HEART			INFILTRATION OF LEUCOCYTES	+	ADENOMA: PITUITARY GLAND
			LYMPH NODES			ANGIECTASIA	+	
			SPLEEN			HEMOSIDEROSIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+ + +	
			PANCREAS		•	ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + +	
	,		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + +	ADENOMA		
			MAMMARY GLAND		_	HYPERPLASIA	+	
			BRAIN			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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11 - F1 - 1047APPENDIX

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CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

ANIMAL 1) ANIMAE FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDING
1047 Y	743	HEART			FIBROSIS	+	ADENOMA: UTERUS
		SPLEEN			HEMOSIDEROSIS	+++	
		CECUM			GRANULATION	+	
		LIVER			INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS	+ +	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
		UTERUS			ADENOMA		
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	. + +	CONGESTION	+	
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	۲۲) +	
		ADRENAL GLANDS			HYPERPLASTIC NODULE (UNILATERAL)	+	
		MAMMARY GLAND			DILATATION OF GLAND	+	
		EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+ + +	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+ + + +	
		HARDERIAN GLANDS	a		INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
1) FATE	, , , , , , , , , , , , , , , , , , ,	1		. NEGATIVE + , SLIGH	BILATERAL)	DE OF MASS	: :
•		H 2 C C C C C C C C C C C C C C C C C C		++ NOD	MODERATE B .	MEDIAL /	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED	
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APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE M P P M LEVEL AND SEX :

	 	 		! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !		!	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
				! ! ! ! !			
1047 Y	743	Y 743 SPINAL CORD		ر	F 05	-	

CYST

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM LEVEL AND SEX :

1	1 1 1 1	1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]]]] !	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1048	>-	272	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			LYMPH NODES		1	ANGIECTASIA	+	
			SPLEEN			HEMOSIDEROSIS	++	
			SUBLINGUAL		u .	FIBROSIS (UNILATERAL)	+	
			LIVER		<u>u.</u> u.	FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT FATTY DEGEMERATION OF HEPATIC CELLS	+ + +	
			PANCREAS		A	ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS		0 10	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + + +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F1-1049 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1	1						STUDY NO. 83004
ANIMAL FA NUMBER	1) FATE DA	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	I I I	2) GRADE	PATHO
1049	W 68	686	ABDOMINAL CAVITY HEMORRHAGE	Y HEMORRHAGE	+ + +		1 1 1 1 1 1	TIOCYTOSIS: M
			HEART			FIBROSIS	+	ORGANS
			LYMPH NODES (SUBMAXI.)			INCREASE OF PLASMA CELLS PROLIFERATION OF RETICULAR CELLS	+ + +	
			LYMPH NODES (MESENT.)			PRÖLIFERATION OF RETICULAR CELLS HISTIOCYTOSIS	+ +	
			SPLEEN			HEMOSIDEROSIS CONGESTION ATROPHY	+ + + + +	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS HISTIOCYTOSIS	+ + + +	
			NASAL CAVITY			HYPERSECRETION	+	
			LARYNGOPHARYNX			INFLAMMATION	+	
			LUNG	WHITISH PATCH	+ + +	HISTIOCYTOSIS	++++	
			LIVER	WHITISH PATCH	+ +	PROLIFERATION OF KUPFFER CELLS CYST PROLIFERATION OF BILE DUCT	+ + + + +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+ + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED
11-F1-1049
APPENDIX

J.

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE О РРМ LEVEL AND SEX :

ANIMAL 1) FATE) 4) E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
NUMBER	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PATHOLOGICAL FINDING
1049 W	686	KIDNEYS			CALCIFICATION (BILATERAL)	+ ·	
					HTALINE DROPLE! DEGENERALION (BILATERAL)	+	
		URINARY BLADDER			INFLAMMATION	+	
		OVARIES			ATROPHY (BILATERAL)	+ +	
		UTERUS			HISTIOCYTOSIS	+	
		PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ +	HYPERPLASIA OF CHROMOPHOBE CELLS HEMORRHAGE	+ + S -	
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	ERAL) +	
		ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	COR	+ +	
					HYPERPLASIA OF MEDULLARY CELLS (BILATERAL)	+	
		MUSCLE (Q.			HISTIOCYTOSIS	+	
		SKIN			HISTIOCYTOSIS HENORRHAGE	+ + + + +	
		HARDERIAN GLANDS			ATROPHY (BILATERAL)	+	
		BRAIN	IMPRESSION	+	АТВОРНҮ	+ +	
1) FATI	, w . a	KILLED IN EXTREM	1S 2) GRADE	EGA	PRESENTED 3)	GRADE OF MASS A / SMALL AND	OF MASS: SMALL AND/OR SINGULAR
	1			QOW \ ++	MODERATE	`	ID/OR SPORADIC

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS				
PROBAB OF DEATH PATHOLOGIC			·	: /OR SINGULAR D/OR SPORADI(
2) GRADE	+			3) GRADE OF MASS: A SMALL AND/OR SINGULAR B MEDIAL AND/OR SPORADIC C LARGE AND/OR MULTIPLE
HISTOPATHOLOGICAL FINDINGS	P I GMENTATION			NOT PRESENTED HT KATE RE
2)3) GRADE			•	. NEGATIVE NOT I NEGATIVE NOT I NOT
SS PATHOLOGICAL FINDINGS	· · ·			2) GRADE
ORGAN GROSS	z		•	1) FATE: W , KILLED IN EXTREMIS 4) DAYS: AFTER START OF TREATMENT
! ! !	6 BRAIN			W , KILLED A / KILLED AFTER START
1) 4) FATE DAYS	V 686			FATE: V
ANIMAL NUMBER	1049			1) F

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STUDY NO. 83004

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

O PPM FEMALE

LEVEL AND SEX :

CONTINUED

APPENDIX 11-F1-1049

11-F1-1050 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

1 1	1	! ! !	! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !					STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1050	3	667	MULTIPLE ORGANS	DISCOLORATION	+	MONONUCLEAR CELL LEUKEMIA		BASAL CELL TUMOR: SKIN
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+		•	
			LIVER	NODULE ENLARGEMENT	+ + + + + +	FATTY DEGENERATION OF HEPATIC CELLS +++	+ + + + + + + + + + + + + + + + + + + +	
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+	PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + + + +	
			UTERUS	HEMORRHAGE	+			
			VAGINA			INFLAMMATION	+	
			PITUITARY GLAND	DISCOLORATION	+ +			
			SKIN	NODULE	+	BASAL CELL TUMOR		
			BRAIN	DISCOLORATION	+ +			

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

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11-F1-1051 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE O PPM LEVEL AND SEX :

	1 1 1 1 1						STUDY NO. 83004
ANIMAL 1) HUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLO	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1051 W	733	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ONONUCLEAR CELL LEUKEM
		THORACIC CAVITY	PLEURAL FLUID	+			: MULTIPLE ORGANS ADENOMA: MAMMARY GLAND
		HEART			FIBROSIS	+	
		LYMPH NODES	ENLARGEMENT	++			
		SPLEEN	ENLARGEMENT	++			
		LARYNGOPHARYNX			INFLAMMATION	++	
		LUNG	HEMORRHAGE	+ +	HISTIOCYTOSIS	+	
		LIVER	ROUGHNESS OF SURFACE	++	CHOLANGIOFIBROSIS	+	
		KIDNEYS			PIGMENTATION (BILATERAL)	+ + +	
		OVARIES	ATROPHY (UNILATERAL)	+	ATROPHY (UNILATERAL)	+ +	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	HYPERPLASIA OF CHROMOPHOBE CELLS	+ +	
		ADRENAL GLANDS	WHITISH PATCH (UNILATERAL)	+	CONGESTION (BILATERAL)	† +	
		MAMMARY GLAND	MASS	В	ADENOMA		

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1052

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 0 РРМ LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1052 Y	743	LYMPH NODES			ASE OF PLASMA C	+ +	ADENOMA: PITUITARY GLAND
		(SUBMAXI.) SPLEEN			HEMOSIDEROSIS CONGESTION	+ + +	Theochaolachiona agaireach GLANDS
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
		NASAL CAVITY			INFLAMMATION	++	
		LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CE	CELLS +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	÷ ÷	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	‡ ‡ ~	
		OVARIES			ATROPHY (BILATERAL)	+	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + +	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+ (7)	
		ADRENAL GLANDS			NECROSIS (UNILATERAL) PHEOCHROMOCYTOMA (BILATERAL)	+ + +	
		MAMMARY GLAND			HYPERPLASIA	+	
1) FATE	H	: Y , KILLED ON SCHEDULE . A START OF TREATMENT	ULE 2) GRADE TMENT	. NEGATI + SL ++ MO +++ SE	VE NOT PRESENTED 3) IGHT DERATE	GRADE OF MASS A . SMALL AN B . MEDIAL A C . LARGE AN	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS:
	+ , SLIGHT	A , SMALL AND/OR SINGULAR
	++ , MODERATE	B , MEDIAL AND/OR SPORADIC
4) DAYS : AFTER START OF TREATMENT	+++ SEVERE	C . LARGE AND/OR MULTIPLE

DILATATION OF CEREBRAL VENTRICLE HISTOPATHOLOGICAL FINDINGS 2)3) GRADE GROSS PATHOLOGICAL FINDINGS IMPRESSION

CONTINUED

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APPENDIX

STUDY NO. 83004 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT INDIVIDUAL PATHOLOGICAL FINDINGS О РРМ LEVEL AND SEX :

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS

2) GRADE

ORGAN

1) 4) FATE DAYS

ANIMAL NUMBER BRAIN

243

1052

+

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO. 83004	E CAUSE OR MAJOR L FINDINGS		
	2) GRADE	+ +	+ +
	HISTOPATHOLOGICAL FINDINGS	PIGMENTATION (BILATERAL) URINE CAST (BILATERAL)	ANGIECTASIA (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2)3) GRADE	<u> </u>	f I
	S PATHOLOGICAL FINDINGS		
	ORGAN GROS	740 KIDNEYS	ADRENAL GLANDS
1	4) DAYS	740	
! ! !	1) FATE	>-	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ANIMAL 1) 4) FATE DAYS NUMBER	1:02	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ;			. !			STUDY NO. 83004
ANIMAL 1) 4) NUMBER) 4) E DAYS	ORGAN	THOLOGI	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1103 Y	240	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +++	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +			
		ADRENAL GLANDS			HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	· + +	
		MAMMARY GLAND	MASS	U			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1) FATE : Y / KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT + + , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F2-1105

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLGGICAL FINDINGS
1105	3	722	HEART		•	FIBROSIS	+	ADENOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS CONGESTION	+ + + + +	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	* *	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+ + + + + +	
		·	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (UNILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + +++	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ + + + +	ADENOMA		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	ENLARGEMENT	+ + +	HYPERPLASIA	+ + +	
			BRAIN	IMPRESSION	+	DILATATION OF CEREBRAL VENTRICLE	. +	
1)	1) FATE	X 4	XILLED IN EXTREMIS TER START OF TREATMENT	2) GRADE	. NEGATIVE + , SLIGH ++ , MODER +++ , SEVER	NOT PRESENTED 35 GRADE IT A A A A A A A A A A A A A A A A A A A	OF MASS: SMALL AND/OR MEDIAL AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

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LEVEL

! ! ! ! !	. 1	; ; ; ;						STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1106	>-	240	KIDNEYS			PIGMENTATION (BILATERAL)	 	
					•	CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
						(UNICAIERAL) REGENERATIVE RENAL TUBULE	+	
						CONTENTED (BILATERAL)	+	
			UTERUS	ENLARGEMENT	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)		

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

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ANIMAL 1) 4) HUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1107	>-	072	Y 740 COLON	NODULE	+ +			
			LIVER	YELLOWISH CHANGE	++			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + ++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + +			
			BRAIN	IMPRESSION				

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS		
	2) GRADE	1	+ ++
	HISTOPATHOLOGICAL FINDINGS		CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)
! ! ! ! !		; ; ; ; ; ; ; ; ; ;	
	GROSS PATHOLOGICAL FINDINGS	YELLO	
	ORGAN	VER	KIDNEYS
1 1 1 1 1	1) 4) FATE DAYS	740	
1 1 1	L FATE	>-	

NUMBER ANIMAL

1108

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFIER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1	1	! ! !			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		! ! ! !	STUDY NO. 83004
ANIMAL 1) 4) NUMBER FATE DAYS	1) FATE	4) DAYS	0RGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1109	>	072	740 KIDNEYS		<u> </u>	IGMENTATION (BILATERAL) NFILTRATION OF LEUCOCYTES (UNILATERAL) HRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+++	
			UTERUS	ENLARGEMENT	+ + +			
			ADRENAL GLANDS		-	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			SKIN (SUBCUTIS) MASS	MASS	U			

A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE 3) GRADE OF MASS: 2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

! ! ! ! !	1	 						STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	S PATHO	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1110	×	686	LE OR			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	++++			
			LUNG	HEMORRHAGE	+	HEMORRHAGE	+	
			LIVER	ENLARGEMENT CONGESTION	+ + + +	CONGESTION	+	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	ADENOMA		

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 1) FATE : X , FOUND DEAD

4) DAYS : AFTER START OF TREATMENT

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3) GRADE OF MASS:

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ;	! ! ! !			: : : : :		 3 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE C OF DEATH OR PATHOLOGICAL F
1111	>-	240	KIDNEYS		O II I	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	. + + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + +			
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

								STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1112	33	550	SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	ADENOMA: PITUITARY GLAND
			LIVER	YELLOWISH CHANGE ENLARGEMENT	+ + +	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+ +	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + ,++ +	
			PITUITARY GLAND	ENLARGEMENT	+ + +	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			SKIN	MASS	А			
			BRAIN	IMPRESSION	+	ATROPHY DILATATION OF CEREBRAL VENTRICLE	+ + + + +	

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A ' SMALL AND/OR SINGULAR
B ' MEDIAL AND/OR SPORADIC
C ' LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1	! ! !	1 1 1 1			! ! ! !		 	STUDY NO. 83004
ANIMAL 1) 4) RATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1113	>-	741	741 LUNG	NODULE	+			
			KIDNEYS			INFILTRATION OF LEUCOCYTES	++	
						(BILATERAL)	•	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE	+	
						GLOMERULONEPHROPATHY (BILATERAL)		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM LEVEL AND SEX :

					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	GICAL 2)3) INGS GRADE	HISTOPATHOLOGICAL FINDIN	2) GRADE	R NGS
1114 Y 741	Y 741 KIDNEYS		D G O	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
	ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

3) GRADE OF MASS: 2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM LEVEL AND SEX :

FEMALE

1 1 1 1 1 1	1 1 1						STUDY NO. 83004
1) FATE	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
>-	741	HEART	NODULE	! ! ! ! ! ! ! !			
		SPLEEN	ENLARGEMENT	`+ +			
		KIDNEYS		а	PIGMENTATION (BILATERAL)		
				n I	URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
				Ü	(BILATERAL) CALCIFICATION (BILATERAL)	+	
		PITUITARY GLAND	HEMORRHAGE	+			
		ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		MAMMARY GLAND	MASS	ပ			

NUMBER ANIMAL

1115

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM LEVEL AND SEX :

FEMALE

		1			STUDY NO. 83004
ANIMAL 1) 4) ORGAN FATE DAYS NUMBER	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1116 Y 741 KIDNEYS			CHRONIC PROGRESSIVE	 	
			PIGNET OF TENEDRALD (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
			'SICATERAL' CALCIFICATION (BILATERAL)	+	
OVARIES	EDEMA (UNILATERAL)	+			
PITUITARY GLAND	D ENLARGEMENT HEMORRHAGE	+ + +			
ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO.	PROBABLE CAUSE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS								
	2)	GRADE	! ! ! ! !	+	. +	+	+			
1		FINDINGS		CHRONIC PROGRESSIVE	PIGMENTATION (BILATERAL)	CALCIFICATION (BILATERAL)	INFILTRATION OF LEUCOCYTES	(BILATERAL)		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2)3)	GRADE	! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !							+
	GROSS PATHOLOGICAL		ENLARGEMENT						ENLARGEMÈNT	HEMORRHAGE
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ORGAN		SPLEEN	KIDNEYS					UTERUS	
1	(7)	0 1	4.1							
1 1 1 1	1)									
1 1 1 1	ANIMAL 1) 4)	NUMBER								

4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

				STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS		
					2) GRADE	+ + + +	
11-F2-1118	CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT	INDIVIDUAL PATHOLOGICAL FINDINGS	: 10 PPM FEMALE		HISTOPATHOLOGICAL FINDINGS	PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (UNILATERAL)	
APPENDIX	INOGENIC METHANOL	IDUAL PAT	LEVEL AND SEX :	1 1 2 2 8 2	2)3) GRADE		+ + + + +
	CHRONIC AND CARC	VIONI	LEVEL		GROSS PATHOLOGICAL FINDINGS		ENLARGEMENT HEMORRHAGE
					ORGAN	KIDNEYS	PITUITARY GLAND
				1 1 1 1	ANIMAL 1) 4) . FATE DAYS HUMBER	741	
				1 1 1 1	L 1) FATE	>	
				1 1 1	ANIMAL NUMBER	11 13 8	

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3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C , LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	SLIGHT	++ / MODERATE	+++ , SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1			. !			STUDY NO. 83004
ANIMAL F. NUMBER	1) FATE	4) DAYS	0 R G A N	0 11	2)3) GRADE	HISTOPATHOLOGICA	GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1119	>	561	MULTIPLE ORGANS		+ + +	MONONUCLEAR CELL LEUKEMIA	1 1 1 1 1 1 1	MONONUCLEAR CELL LEUKEMIA
			THORACIC CAVITY	PLEURAL FLUID	+			: MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+ + +			
			LUNG	DISCOLORATION	+	OSSEOUS TISSUE	+	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ + + +	FATTY DEGENERATION OF HEPATIC CELLS +++	+ + + S	
·			KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	÷ + +	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
			ADRENAL GLANDS		-	CONGESTION (UNILATERAL)	+ +	
			MAMMARY GLAND	ENLARGEMENT	+	HYPERPLASIA	+ +	

4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F2-1120

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1120 W	659	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUXEMIA : MULTIPLE ORGANS
		HEART			FIBROSIS	+	•
		LYMPH NODES			INCREASE OF PLASMA CELLS	+	POLYP: UTERUS
		(SUBMAXI.) LYMPH NODES (MESENT.)	ENLARGEMENT HEMORRHAGE	+ +	BLOOD ABSORPTION	+ +	ADENDMA: PILOITAKY GLAND
		SPLEEN	ENLARGEMENT	+ + +			
		LIVER	ROUGHNESS OF SURFACE EMLARGEMENT REDDISH CHANGE	+ + +	ANGIECTASIA	+	
		KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
		UTERUS			POLYP		
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + +	ADENOMA		
		ADRENAL GLANDS	NODULE (UNILATERAL)	+	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ + +	
		MAMMARY GLAND	MASS	v	FIBROADENOMA		
		BRAIN			PIGMENTATION	+	
1) FAT	H	KILLED IN EXTREMI	IS 2) GRADE :	NEGATIVE NOT + SLIGHT ++ MODERATE	ATIVE NOT PRESENTED 3) GRADE SLIGHT A 1 S MODERATE B 1	S OF MASS SMALL ANI	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
4) DAYS		AFTER START OF TREATMENT		+++ SE		. LARGE AN	:D/OR MULTIPLE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

APPENDIX 11-F2-1121

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

ANIMAL 1) FATE							
NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1121 W	687	HEART			FIBROSIS	+	: PIT
		SPLEEN	ENLARGEMÈNT	`+ +	EXTRAMEDULLARY HEMATOPOIESIS	+ + +	FIBROADENOMA: MAMMARY GLAND
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ + +	
		LARYNGOPHARYNX			CYSTIC DILATATION OF GLAND	+	
		LUNG	NODULE	+	ADENOMATOSIS	+	
		LIVER			FOCAL ATROPHY OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
		KIDNEYS			URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	+ + + +	
		PITUITARY GLAND	EMLARGEMENT HEMORRHAGE	+ +	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
		ADRENAL GLANDS			CONGESTION (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ + + +	
		MAMMARY GLAND	MASS	U	FIBROADENOMA		

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS		G OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
2) GRADE		GRADE B C
HISTOPATHOLOGICAL FINDINGS		PRESENTE
2)3) GRADE	+	NEGATI + SL ++ MO ++ SE
SS PATHOLOGICAL FINDINGS	I M P R E S S I O N	GRADE
ORGAN GROSS	BRAIN IMPR	D IN EXTREMIS RT OF TREATMEN
4) DAYS	687 BR	A A
1) FATE	3	FATE: DAYS:
ANIMAL NUMBER	1121	1)

v.

STUDY NO. 83004

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM FEMALE

LEVEL AND SEX :

CONTINUED

APPENDIX 11-F2-1121

11-F2-1122 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1	1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!						STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1122	! ∃						; ; ; ;	
1 1 1	≥	0	אר ב בא	ENLARGEMENT	+ + +	EXTRAMEDULLARY HEMATOPOIESIS	+++	ADENOCARCINOMA: CLITORAL
			רחאפ	DISCOLORATION	+			ADENOCARCINOMA: XIDNEYS
			LIVER	DISCOLORATION	+ + +	FOCAL NECROSIS	++	
			KIDNEYS	WHITISH PATCH (UNILATERAL)	+	PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) ADENOCARCINOMA (UNILATERAL)	+ + +	
			VAGINA	ADHESION	+			
			CLITORAL GLAND	MASS	υ	ADENOCARCINOMA		
			PITUITARY GLAND		J	CONGESTION	+	
			ADRENAL GLANDS		•	HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			BONE (FEMUR)		J	OSTEOSCLEROSIS	+ +	
				•				

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

A.

CHROMIC AND CARCINGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

LEVEL AND SEX : 10 PPM FEMALE

	1			1 1 1 1 1 1		; ; ; ;	STUDY NO. 83004
ANIMAL 1) 4) HUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	03ABL EATH 0GICA
1123 Y	741	Y 741 KIDNEYS		O OA	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	. + ++	
		ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE

4) DAYS : AFTER START OF TREATMENT

PRESENTED 3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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APPENDIX 11-F2-1124

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

LEVEL AND SEX : 10 PPM FEMALE

ANIMAL NUMBER

1124

; ; ; ;				 1 1 1 1 1			STUDY NO. 83004
+ ATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	 2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
≊	735	MULTIPLE ORGANS		: 	MONONUCLEAR CELL LEUKEMIA	! ; ! ! !	MONONUCLEAR CELL LEHKEMIA
		НЕАКТ			FIBROSIS	+	: MULTIPLE ORGANS FIBROADENOMA: MAMMARY
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	GLAND
		SPLEEN	E N L A R G E M E N T N O D U L E	+ + + +	CAPSULITIS	+ +	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ + +	
		LIVER	ATROPHY ROUGHNESS OF SURFACE	+ +	EXTRAMEDULLARY HEMATOPOIESIS HYPERPLASTIC NODULE	+ +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS	٠,		CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + +	
		UTERUS	ENLARGEMENT	+++	CACCIFICATION (BILATERAL) DILATATION OF DUCT INFILTRATION OF LEUCOCYTES	+ ++	
		PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX :

FEMALE

10 PPM

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 			STUDY NO.
ANIMAL 1) 4) FATE DAYS	1) FATE		ORGAN		GROSS PATHOLOGICAL FINDINGS	2)3) GRADE		2 GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
	 	! ! !		! ! ! ! ! ! !		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1124	М	735	735 PITUITARY GLAND						
						Σ	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			ADRENAL GLANDS				CONGESTION (BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ +	
			MAMMARY GLAND	MASS		8	FIBROADENOMA		

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F2-1125

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM

FEMALE

ANIMAL 1) 4) ORGANUMBER FATE DAYS
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¹⁾ FATE : Y , KILLED ON SCHEDULE

⁴⁾ DAYS : AFTER START OF TREATMENT

²⁾ GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1	1 1 1 1	1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN		2)3) GRADE	HISTOPATHOLOGICAL FINDINGS		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1126	>-	741	SPLEEN	ENLARGEMENT	+ +		 	
			LIVER	ENLARGEMENT YELLOWISH CHANGE	+ +			
			KIDNEYS	IMPRESSION (UNILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+++	
						PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ + +	
						CALCIFICATION (UNILATERAL)	+	
			OVARIES	CYST (UNILATERAL)	+			
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS			EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)	+	
			MAMMARY GLAND	MASS	ပ			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !	 			1			STUDY NO. 83004
ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
7011	=				; ; ; ; ; ;		1 1 1	PATHOLOGICAL FINDINGS
1121	≱	658	HEART		u.	FIBROSIS	+	:
			SPLEEN		Ι. Ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOTESIS	+ + + +	NIAN DEALE
			LARYNGOPHARYNX		3	CYSTIC DILATATION OF GLAND	· +	
			LIVER		ĽS	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+++	
			KIDNEYS		C	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF 1FHCOCYTES	+ +	
					ΔŰ		+ + ++	
			BONE (FEMUR)		ő	OSTEOSCLEROSIS	++	
			BRAIN	SOFTENING	+ AS	ASTROCYTOMA		

1) FATE : W / KILLED IN EXTREMIS

GRADE: NEGATIVE NOT PRESENTED

+ ' SLIGHT

++ ' MODERATE

+++ ' SEVERE

4) DAYS : AFTER START OF TREATMENT

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11-F2-1128 APPENDIX

CHRONIC AND CARCINDGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO. 83004		
 	2) GRADE	++ +++
	HISTOPATHOLOGICAL FINDINGS	PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) URINE CAST (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)
! ! ! !	2)3) HI GRADE	T1 050
	GROSS PATHOLOGICAL FINDINGS	
	ORGAN	742 KIDNEYS
; 1 1 1 1 1	1) 4) TE DAYS	۲ 742
	ANIMAL 1) 4) NUMBER	1128

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	STUDY NO. 83004
ANIMAL 1) NUMBER	E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1129 14	659	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
		SPLEEN			EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ + + +	
		LUNG	HEMORRHAGE	+	CALCIFICATION OF VASCULAR WALL HEMORRHAGE	+ +	
		LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS	+ + + S	
		KIDNE¶S			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ ++	
		UTERUS		•	DILATATION OF DUCT	+	
		PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ + + + +	ADENOMA		
		BONE (FEMUR)			OSTEOSCLEROSIS	+ + +	
		BRAIN	IMPRESSION	+	ATROPHY HEMORRHAGE	+ + + +	
1) FATE 4) DAYS	N	/ KILLED IN EXTREMIS TER START OF TREATMENT	2) GRADE	: NEGATIVE NOT + , SLIGHT ++ , MODERATE +++ , SEVERE	ATIVE NOT PRESENTED 3) GRADE SLIGHT B 1 SEVERE C 1	OF MASS SMALL AN MEDIAL A LARGE AN	OF MASS: SMALL AND/OR SINGULAR AMD/OR SPORADIC LARGE AND/OR MULTIPLE

11-F2-1130 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM LEVEL AND SEX :

- 1		2) 3S GRADE	Р		MUNDNUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS			++	(BILATERAL) + (INTIATEDAL)	1. A T F D A 1.	
	2)3) HISTOPATHOLISE			MONONUCLEAR CELL ! FIIKEMIA			ADENOMATOSIS		PIGMENTATION (BILATERAL) CALCIFICATION (HNII ATERA)	PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) URINE CAST (BILATERAL)	
1	2	GRADE			+	+ + +	+	+			
	GROSS PATHOLOGICAL	GROSS PATHOLOGICAL FINDINGS		S	ABDOMINAL CAVITY ASCITES (BLOODY)	ENLARGEMENT	WHITISH PATCH	ROUGHNESS OF SURFACE			
	ORGAN		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MULTIPLE ORGANS	ABDOMINAL CAVIT	SPLEEN	LUNG	LIVER	KIDNEYS		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(7)	V .	 	769							
! ! !	1)	ц 		×							
1 1 1 1 1 1 1 1	ANIMAL 1) 4)	KUMBER		1130							

1) FATE: X , FOUND DEAD

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

10 PPM FEMALE LEVEL AND SEX :

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		; ; ; ; ; ;	STUDY NO. 83004
AHIMAL 1) 4) ORGAN FATE DAYS NUMBER	GROSS PATHOLOGICAL FINDINGS	^	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
		! ! ! ! !			
1131 Y 742 LIVER	REDDISH PATCH	+			
KIDNEYS		S	CHRONIC PROGRESSIVE	+	
		,	GLOMERULONEPHROPATHY (BILATERAL)		
		<u>а</u> .	PIGMENTATION (BILATERAL)	++	
		I	INFILTRATION OF LEUCOCYTES	+	
			(BILATERAL)		
		υ	CALCIFICATION (UNILATERAL)	+	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1132

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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11-F2-1133 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !	1 1			! ! ! ! !			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) A T E		ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1133	> -	272	SPLEEN	ENLARGEMENT	+			
			LIVER	REDDISH PATCH	+			
			KIDNEYS		d.	PIGMENTATION (BILATERAL)	+++	
					U I	CALCIFICATION (UNILATERAL)	+ -	
					ρH	UKINE CASI (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
						(BILATERAL)		
			ADRENAL GLANDS		ш	EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

11-F2-1134 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

; ; ; ; ; ; ; ; ;	1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		; ; ; ; ;	STUDY NO. 83004
ANIMAL 1 FATI NUMBER	D A	4) ORGAN YS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINATINGS
1134	W 680	MULTIPLE ORGANS		 	MONONUCLEAR CELL LEUKEMIA		
		LYMPH NODES	ENLARGEMENT	+ +			**************************************
		SPLEEN	WHITISH PATCH ENLARGEMENT	. + + + +			GRANULAR MYOBLASTOMA : UTERUS
		rung	REDDISH CHANGE	+	HEMORRHAGE	+	
		LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ +	MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFLIRATION OF LEUCOCYTES (UNILATERAL)	+ + + +	
		UTERUS			GRANULAR MYOBLASTOMA		
		PITUITARY GLAND B	ENLARGEMENT HEMORRHAGE	+ + + + +	АDЕмома		
		ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
		MAMMARY GLAND			DILATATION OF GLAND	+	
1) FATE	A 	XILLED IN EXTREMIS	2) GRADE :	NEGATIV + SLI	E NOT PRESENTED 3) GRADE GHT A A	OF MASS: SMALL AND/OR	OF MASS: SMALL AND/OR SINGULAR

4) DAYS : AFTER START OF TREATMENT

++ / MODERATE +++ / SEVERE

B / MEDIAL AND/OR SPORADIC C / LARGE AND/OR MULTIPLE

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3) GRADE OF MASS:

CONTINUED
11-F2-1134
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE

10 PPM

LEVEL AND SEX :

STUDY NO. 83004	PROBABLE CAUSE Of DEATH OR MAJOR	PATHOLOGICAL FINDINGS		
	2) GRADE		+	+
	HISTOPATHOLOGICAL FINDINGS		АТВОРНУ	DILATATION OF CEREBRAL VENTRICLE
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2)3) GRADE		+	+
	GROSS PATHOLOGICAL FINDINGS		IMPRESSION	REDDISH CHANGE
	ORGAN		BRAIN	
1 1 1 1 1	1) 4) FATE DAYS	1	W 680 BRAIN	
1 1 1 1	1) FATE	!!!	>	
1	ANIMAL 1) 4) FATE DAYS		1134	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE: W , KILLED IN EXTREMIS

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO. 83004	PROBABLE C OF DEATH OR PATHOLOGICAL F		
	2) GRADE	+ + + +	+ +
	2)3) HISTOPATHOLOGICAL GRADE FINDINGS	URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) ANGIECTASIA (UNILATERAL)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GROSS PATHOLOGICAL FINDINGS		
	ORGAN	Y 742 KIDNEYS	ADRENAL GLANDS
! ! ! ! ! ! !	4) DAYS	742	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1) FATE	>-	
; ; ; ; ;	ANIMAL 1) 4) NUMBER	1135	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

: : : : : :		1			1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	AL 2)3) S GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1136	>-	742	742 KIDNEYS	OF SURF	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	 + + + + +	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS	ENLARGEMENT	+ + +	PHEOCHROMOCYTOMA (BILATERAL)		

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F2-1137 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

		1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1137	3	713	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			SPLEEN	ENLARGEMENT MASS	+ + V			
			LARYNGOPHARYNX			CYSTIC DILATATION OF GLAND	+	
			LUNG	HEMORRHAGE	+ + +			
			LIVER	WHITISH PATCH	+	FOCAL NECROSIS	+ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + +	
			PITUITARY GLAND	HEMORRHAGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS CONGESTION	+ +	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	HEMORRHAGE	+ +	HEMORRHAGE	+ +	
			SPINAL CORD			HEMORRHAGE	+	

2) GRADE : NEGALIVE NO! PRESENTED	+ SLIGHT	++ / MODERATE	+++ > SEVERE
1) FAIE: W / KILLED IN EXIREMIS			4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL NUMBER	1) - A T E	ANIMAL 1) 4) FATE DAYS NUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	2)3) HISTOPATHOLOGICAL GRADE FINDINGS	ı	2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
	> -	742	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + +	
			PITUITARY GLAND	REDDISH PATCH	+			
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ ' SLIGHT
++ ' MODERATE
+++ ' SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F2-1139 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1	1	.1			! ! ! ! !			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1139	3	680	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	. +	: MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+ + +			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	REDDISH CHANGE	+			
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ +	PROLIFERATION OF BILE DUCT	+	
			KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + + +	
			PITUITARY GLAND	ENLARGEMENT	+	CONGESTION HYPERPLASIA OF CHROMOPHOBE CELLS	+ +	
			THYROID GLANDS	DISCOLORATION (BILATERAL)	+			
			ADRENAL GLANDS			CONGESTION (BILATERAL)	+	

3) GRADE OF MASS:	A . SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C . LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ > SLIGHT	++ / MODERATE	+++ SEVERE
1) FATE : W , KILLED IN EXTREMIS			4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

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ANIMAL 1) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1140	! ! 3 !	721	MULTIPLE ORGANS			MONOUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MIII TIPI F ORGANS
			SPLEEN	ENLARGEMENT	+ + +			PAPILLARY ADENOMA: THYROTO GLANDS
			LIVER	ROUGHNESS OF SURFACE	+ + +			
			KIDNEYS	CYST (UNILATERAL)	+ +	CYST (UNILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL)	+ + + + + + +	
			PITUITARY GLAND	ENLARGEMENT	+	CYST	+.	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+ + +	PAPILLARY ADENOMA (UNILATERAL)		
			MAMMARY GLAND			HYPERPLASIA	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE: W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

APPENDIX 11-F2-1141

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004	2) PROBABLE CAUSE DE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	MONONUCLEAR CELL LEUKEMIA	. MULITHE OKGANS								
	2) GRADE						+ +	+ + + + + + .	+ +	11.) +	
	HISTOPATHOLOGICAL FINDINGS	لــ					ATROPHY OF PANCREATIC ACINUS	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	HYPERPLASIA OF C-CELLS (UNILATERAL)	
 	2)3) GRADE		+	+ + + +	+ +	+ +			+ +		+
	GROSS PATHOLOGICAL FINDINGS		ENLARGEMENT	ENLARGEMENT WHITISH PATCH	NODULE REDDISH CHANGE	ROUGHNESS OF SURFACE ENLARGEMENT			ENLARGEMENT HEMORRHAGE		ENLARGEMENT (BILATERAL)
1 1 1 1 1 1 1 1 1 1 1 1 1	ORGAN	MULTIPLE ORGANS	LYMPH NODES	SPLEEN	LUNG	LIVER	PANCREAS	KIDNEYS	PITUITARY GLAND	THYROID GLANDS	ADRENAL GLANDS
! ! ! !	4) DAYS	999									
; ; ; ;	1) FATE	3									
 	ANIMAL NUMBER	1141									

2) GRADE : NEGATIVE NOT PRESENTED + C SLIGHT + C MODERATE + C SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

CONTINUED	
11-F2-1141	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

> ANIMAL NUMBER

1141

STUDY NO. 83004

PROBABL OF DEATH PATHOLOGICA							
2 GRADE	+					**	
2)3) HISTOPATHOLOGICAL GRADE FINDINGS	DILATATION OF GLAND						
GROSS PATHOLOGICAL FINDINGS							
4) ORGAN DAYS							
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1) FATE							

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

	1 1 1 1	! ! ! !			 		 	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	2)3) HISTOPATHOLOGICAL GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1142	>	742	Y 742 KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + + + +	
			UTERUS	MASS	ď			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE 1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR			
	2) GRADE	+ + +		+ +
	HISTOPATHOLOGICAL FINDINGS	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)		VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)
 	2)3) GRADE	1 	+ + +	
	GROSS PATHOLOGICAL FINDINGS		ENLARGEMENT HEMORRHAGE	
	ORGAN	743 KIDNEYS	PITUITARY GLAND	ADRENAL GLANDS
1 1 1	4) DAYS			
1	1) FATE	>		
	ANIMAL 1) 4) FATE DAYS NUMBER	1143		

1) FATE: Y XILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

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LEVEL

83004	PROBABLE CAUSE DEATH OR MAJOR		
STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR	. 1 1	
	2) GRADE	+ +++	
STUDY NO. 83004	HISTOPATHOLOGICAL FINDINGS	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	
1	2)3) GRADE		+
	GROSS PATHOLOGICAL FINDINGS	1	MORRHAGE
	ORGAN G	743 KIDNEYS	PITUITARY GLAND HEMORRHAGE
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1) 4) E DAYS	743	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ANIMAL 1) 4) NUMBER	1144 Y 743 KIDNEYS	

4) DAYS : AFTER START OF TREATMENT 1) FATE: Y KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN GROSS PAT	GROSS	HOLOGICAL FINDINGS	2)3 GRADE) HISTOPATHOLOGICAL FINDINGS	2) GRADE	2) PROBABLE CAUSE RADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1145		743	Y 743 KIDNEYS				CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	+ + + +	
			ADRENAL GLANDS		·		CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	. + + +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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						10 10	METHANOL I	IN FISCHER P	RAT			
						INDIVI	INDIVIDUAL PATHOLOGICAL		FINDINGS			
				,		LEVEL	AND SEX :	10 PF	PPM FEMALE			
į	1	1 1 1 1	1 1 1 1 1 1	; ; ; ; ; ;	 		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1			STUDY NO. 8	83.
MAL BER	1) FATE	4) DAYS	ORGAN	Z I	GROSS PA	PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE O OF DEATH OR PATHOLOGICAL B	ı a i
9	> -	743	KIDNEYS				O AH O	CHRONIC PROGRE GLOMERULONEPH PIGMENTATION (INFILTRATION O (BILATERAL)	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	AL) + + + + + + + + + + + + + + + + + + +		
			ADRENAL	GLANDS			Αď	NGIECTASIA HEOCHROMOC)	ANGIECTASIA (UNILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)	+ +		
			MAMMARY GLAND	GLAND	MASS		В					
					·							
	i				9 8 3 1 1		1 1 1 1 1 1	; ; ; ; ; ;	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	į
1)	FATE	! ! ••	LLED	S	L L	2) GRADE	: NEGATIVE NOT + SLIGHT ++ NODERATE	ATIVE NOT PRESENTED SLIGHT MODERATE	3)	GRADE OF MASS: A SMALL AND/OR B MEDIAL AND/OI	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC	
7)	DAYS	••	AFTER START	OF TREATMENT	MENT		+++ SEVE	R E		`	ND/OR MULTIPLE	

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS

ANIMAL NUMBER

1146

STUDY NO. 83004

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY

11-F2-1146

APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

					1		 	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	ROSS PATHOLOG	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1147	3	629	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MII IIPIF ORGANS
			HEART	WHITISH PATCH	+			
			LYMPH NODES	ENLARGEMENT	+		÷	
			(SUBMAXI.) LYMPH NODES	ENLARGEMENT	+			
			CPULM.HILUS) LYMPH NODES	ENLARGEMENT	+			
			(MESENI.) SPLEEN	ENLARGEMENT	+ +			
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ + + + + +			
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
			MAMMARY GLAND			HYPERPLASIA	+	

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

1

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3) GRADE OF MASS:

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	1 1 1 1			1		1 1 1 1 1 1	STUDY NO: 83004
ANIMAL NUMBER	1	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	0 G F I	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1148	>-	743	SPLEEN	ENLARGEMENT NODULE	+ +			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +++	
			PITUITARY GLAND	E NL ARGEMENT HEMORRHAGE	+ + + + +	(BILATERAL)		
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) EXTRAMEDULLARY HEMATOPOIESIS (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ + + + +	
			SKIN	NODULE	+++			

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++, NODERATE +++ , SEVERE

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11-F2-1149 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1	!	1			! ! ! ! !			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	4) ORGAN G DAYS	ROSS PATHOL FIN	2)3) GRADE	OGICAL 2)3) HISTOPATHOLOGICAL DINGS GRADE 	2) GRADE	2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1149	> -	743	KIDNEYS		0 4	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ + + + +			
			BRAIN	IMPRESSION	++			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT.

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX: 10 PPM FEMALE

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	4) ORGAN YS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	OLOG	 2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1150 W 631	1 SPLEEN			HEMOSIDEROSIS	 	ADENOMA: PITUITARY GLAND
	NASAL CAVITY	> -	1	INFILTRATION OF LEUCOCYTES	+	
	LIVER		2.01	FATTY DEGENERATION OF HEPATIC CELLS ++ SMALL GRANULOMA +	+ + + S	
	KIDNEYS		O 24H	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + + +	
	PITUITARY GLAND	LAND MASS REDDISH CHANGE	A ++	ADENOMA		

1) FATE: W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT ++

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

# # # # # # # # # # # # # # # # # # #	 			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004	! ! ! ! !	
ANIMAL 1) 4)	()	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	2)	PROBABLE CAUSE
rale Number	DAYS		FINDINGS	GRADE	FINDINGS	GRADE	OF DEATH OR MAJOR
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	
1151 Y	743	Y 743 KIDNEYS		υ	CHRONIC PROGRESSIVE	+	
					GLOMERULONEPHROPATHY (BILATERAL)		
				<u>а</u>	PIGMENTATION (BILATERAL)	+	
				S	CALCIFICATION (BILATERAL)	+	
		PITUITARY GLAND	ENLARGEMENT				
			HEMORRHAGE	+			

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 10 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !	1 1 1 1 1			1 3 1 1 1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1152	3	729	SPLEEN			HEMOSIDEROSIS	! ! ! ! ! ! +	ADENOMA: PITUITARY GLAND
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+ + +	CALCULOSIS: URINARY BLADDER
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
						GLOMERULOSCLEROSIS (UNILATERAL)	+	
						INFILTRATION OF LEUCOCYTES	+	
						REGENERATIVE RENAL TUBULE	+	
						CALCIFICATION (UNILATERAL)	+	
			URINARY BLADDER	MASS . ' CALCULOSIS THICKENING	, + + + + + +	CALCULOSIS	+ +	
			UTERUS			HEMORRHAGE	+	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ +	ADENOMA		
			THYROID GLANDS			ENLARGEMENT OF FOLLICLE (UNILATERAL) ++	++	
			BRAIN	IMPRESSION	+	АТКОРНҮ	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W . KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) 4) FATE DAYS	1) FATE	4) DAYS	ORGAN	ORGAN GROSS PATHOLOGICAL FINDINGS	2)3) GRADE			PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1201	>-	240	Y 740 SPIFFN	FN: ARGEMENT	+		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
			KIDNEYS		=	CACATA LEGY TOAN BUILDING	-	
			2		י כ	JAINE CASI (DILA ERAL)	+	
					а.	PIGMENTATION (BILATERAL)	++	
					<u>~</u>	REGENERATIVE RENAL TUBULE	+	
						(UNILATERAL)		
			CLITORAL GLAND	NODULE	+			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A.

3) GRADE OF MASS:

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

4.) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM . FEMALE

ANIMAL F NUMBER

	! ! !			: : : : :		! ! ! ! !	STUDY NO. 83004
1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
×	657	MULTIPLE ORGANS	YELLOWISH CHANGE	+ +	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
		HEART			FIBROSIS	+ +	
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		SPLEEN	ENLARGEMENT	+			
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
		LUNG	HEMORRHAGE	+ +	HEMORRHAGE CALCIFICATION OF VASCULAR WALL	+ +	
		LIVER	ENLARGEMENT YELLOWISH CHANGE	+ +	CHOLANGIOFIBROSIS	+	
		KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
					INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
					REGENERATIVE RENAL TUBULE	+	
				•	THICKENING OF BASEMENT MAMBRANE (BILATERAL)	+	
		PITUITARY GLAND	NODULE REDDISH CHANGE	+ +	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	÷ + +	
		BONE (FEMUR)		-	OSTEOSCLEROSIS	+ +	

3) GRADE OF MASS:

PRESENTED		
NOT	+	RATE
GATIVE	SLIGHT	MODERA
EG/	`	`
Z	+	+ +
••		
GRADE		
5)		

+++ SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

SPINAL CORD

BRAIN

MAMMARY GLAND

657

3

1202

EYE BALLS

CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL) PIGMENTATION HYPERPLASIA

+ + + +

PIGMENTATION

		. **		STUDY NO. 83004	S E J O R D I N G S	
λQi					2) GRADE	
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY	OF METHANOL IN FISCHER RAT	INDIVIDUAL PATHOLOGICAL FINDINGS	100 PPM FEMALE		HISTOPATHOLOGICAL FINDINGS	
NOGENIC IN	METHANOL I	DUAL PATHO	LEVEL AND SEX :		2)3) GRADE	
CHRONIC AND CARCI	0.5	INIGNI	LEVEL		GROSS PATHOLOGICAL FINDINGS	
					ORGAN	
					1) 4) FATE DAYS	
					ANIMAL 1) 4) FATE DAYS NUMBER	

CONTINUED

11-F3-1202

APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1	!!!!!!!!!!!!!!	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		STUDY NO. 83004
ANIMAL 1)	1)	(7	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	
NUMBER	T T I I I I I I I I I I I I I I I I I I	DAYS		FINDINGS	GRADE	FINDINGS	GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1203	>-	240	740 KIDNEYS		 	HRINE CAST (DI ATERA).	
						INFILTRATION OF LEUCOCYTES	+ +
						(BICATEKAL) REGENERATIVE RENAL TUBULE	+
						(BICALEKAL) THICKENING OF BASEMENT MAMBRANE	+
						'SICALENEL' PIGMENTATION (BILATERAL)	+
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +		
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS	+
						CONTEATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (BILATERAL)	,
			MAMMARY GLAND	MASS	В		

1) FATE: Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

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2) GRADE: NEGATIVE NOT PRESENTED
+ SLIGHT
++ MODERATE
+++ SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

APPENDIX 11-F3-1204

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1204 X	630	HEART			FIBROSIS	 	ADENOMA: PITUITARY GLAND
		THYMUS		-	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		SPLEEN			HEMOSIDEROSIS	+ + +	
		NASAL CAVITY		-	INFILTRATION OF LEUCOCYTES	+ +	
		LUNG	HEMORRHAGE CONGESTION	+++++	CONGESTIVE EDEMA MIGRATION OF MACROPHAGE IN ALVEOLI INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ + + + +	
		LIVER	CONGESTION	++++	CONGESTION INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+ + + + +	
		KIDNEYS		O I G	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	+ + +	
		UTERUS		HG	INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	
		PITUITARY GLAND	ENLARGEMENT	+++	ADENOMA		

CONTINUED	
11-F3-1204	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL 12 4) FATE DAYS NUMBER	1) ATE	4) DAYS	S GROSS PATHOLOGI S FINDIN	00	AL 2)3) S GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	CRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1204	×	x 630	PITUITARY GLAND	HEMORRHAGE	· + + +			
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	IMPRESSION	+	PIGMENTATION HEMORRHAGE	+ +	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : X , FOUND DEAD 2) GRADE : NEGATIVE NOT + , SLIGHT AND EDATE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

11-F3-1205 APPENDIX

31.3.

CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 100 PPM

1 1 1 1 1 1 1	1	1 1 1			!			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) ATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	THOL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1205	> -	240	N 10		1 	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + ++	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND	NODULE	+			

4) DAYS : AFTER START OF TREATMENT

¹⁾ FATE : Y / KILLED ON SCHEDULE

²⁾ GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOL	GR	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABL OF DEATH PATHOLOGICA
1206 . Y 740 LIVER	> -	072		NODULE	: ! ! ! ! ! !		1 1 1 1 1 1	
			KIDNEYS		2.7.5	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + +	
					Ē,	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND	MASS	В			

1) FATE: Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

J.,

11-F3-1207 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ANIMAL 1) 4) ORGAN FATE DAYS NUMBER	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1207	3	999	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			INFILTRATION OF LEUCOCYTES	+	: MULTIPLE ORGANS C-CELL ADENOMA: THYROID
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS
•			LYMPH NODES	ENLARGEMENT	+			
			CYDLM.HILUS) LYMPH NODES	ENLARGEMENT	+ + +			
			SPLEEN	ENLARGEMENT	+ +			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
			NASAL CAVITY		٠	INFILTRATION OF LEUCOCYTES	++	
			ILEUM			SEROSITIS	+	
			LIVER	YELLOWISH CHANGE ROUGHNESS OF SURFACE	+ +	FOCAL NECROSIS FATTY DEGENERATION OF HEPATIC CELLS	+ + %	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL)	++++	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	ENLARGEMENT	+			

2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :

+ . SLIGHT
+ . MODERATE

B . MEDIAL AND/OR SP

+++ . SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W . KILLED IN EXTREMIS

Sty.

3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC	C / LARGE AND/OR MULITHLE
2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :	+ SLIGHT ++ MODERATE	+++ SEVERE
A TANK TO A TANK	1) TAIL . W . NICLE !!	4) DAYS : AFTER START OF TREATMENT

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

APPENDIX 11-F3-1207

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INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

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ANIMAL 1) 4) FATE DAYS NUMBER	FATE	1) 4) TE DAYS	ORGAN GROSS PATHOLO FIND	GICAL INGS	2)3) GRADE	2)3) HISTOPATHOLOGICAL 2) PROBABLE CAUSE RADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1207		999 M	THYROID GLANDS		S	C-CELL ADENOMA (UNILATERAL)		
			MAMMARY GLAND		Ħ	INFILTRATION OF LEUCOCYTES	+	
			BRAIN		Δ.	PIGMENTATION	+	
			SPINAL CORD		۵.	PIGMENTATION	+	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1	 	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	N GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1208	>-	240	LIVER	REDDISH CHANGE	+			
			KIDNEYS		υ	CHRONIC PROGRESSIVE	+	
					С.	PIGMENTATION (BILATERAL)	+	
					I	INFILTRATION OF LEUCOCYTES	+	
					υ	CALCIFICATION (UNILATERAL)	+	
			ADRENAL GLANDS		x	HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

100 PPM FEMALE LEVEL AND SEX :

STUDY NO. 83004

URFACE + + + + + + + + + + + + + + + + + + +	GROSS PATHOLOGICAL 2)3) HISTOPATHOLOGICAL FINDINGS GRADE FINDINGS	2) GRADE	ROBABLE DEATH O LOGICAL
H NODES H NODES H NODES NDUO.) ENLARGEMENT H CAVITY CAVITY DISCOLORATION HEMORRHAGE H H ROUGHNESS OF SURFACE H NODULE	MONONUCLEAR CELL LEU		MONONUCLEAR CELL LEUKEMIA
H NODES LM.HILUS) H NODES REDDISH CHANGE ++ ENLARGEMENT CAVITY GOPHARYNX DISCOLORATION HEMORRHAGE ++ ROUGHNESS OF SURFACE ++ HEMORRHAGE	FIBROSIS	+	: MULTIPLE ORGANS ADENOMA: PITUITARY GLAND
LM.HILUS) ENLARGEMENT H NODES REDDISH CHANGE ++ L CAVITY VGOPHARYNX DISCOLORATION ++ HEMORRHAGE ++ *** *** *** *** *** *** ***	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FIBROADENOMA: MAMMARY GLAND
H NODES ENLARGEMENT + + + + +	BLOOD ABSORPTION	. +	
ENLARGEMENT +++ L CAVITY GOPHARYNX DISCOLORATION ++ HEMORRHAGE +++ ROUGHNESS OF SURFACE ++ NODULE +++			
L CAVITY NGOPHARYNX DISCOLORATION + HEMORRHAGE ++ ROUGHNESS OF SURFACE + NODULE ++ NODULE ++ +++			
DISCOLORATION + HEMORRHAGE ++ ROUGHNESS OF SURFACE + NODULE ++ HT	INFILTRATION OF LEUCOCYTES	+	
DISCOLORATION + HEMORRHAGE ++ RENLARGEMENT ++ ROUGHNESS OF SURFACE + NODULE ++ EYS	HYPERSECRETION	+	
ENLARGEMENT ++ ROUGHNESS OF SURFACE + NODULE ++			
	SURFACE		
T T CHEN I A I TON A D T F A I	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	4 ++ ++	

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W / KILLED IN EXTREMIS

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CONTINUED
11-F3-1209
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

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ANIMAL 1) 4) FATE DAYS NUMBER	E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1209 W	658	KIDNEYS		; ; ; ; ; ; ; ; ;	,	 	
					INFILTRATION OF LEUCOCYTES	+	
					(BILATERAL) CALCIFICATION (UNILATERAL)	+	
		OVARIES			FOLLICULAR CYST (UNILATERAL)	+	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	++	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
		MAMMARY GLAND	MASS	υ	FIBROADENOMA		
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ ' SLIGHT
++ ' MODERATE
+++ ' SEVERE

PRESENTED 3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

4) ORGAN GROSS PATHOLOGICAL 2)3) HISTOPATHOLOGICAL DAYS FINDINGS GRADE PATHOLOGICAL FINDINGS PATHOLOGICAL FINDINGS PATHOLOGICAL FINDINGS PATHOLOGICAL FINDINGS PIGNET CAST (BILATERAL) PIGNENTATION (BILATERAL) (BILATERAL) CALCIFICATION (BILATERAL) + CALCIFICATION (BILATERAL) CALCIFICATION (BILATERAL) CALCIFICATION (BILATERAL) CALCIFICATION (BILATERAL) CALCIFICATION (BILATERAL)	1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SIUDY NO. 83004
DRINE CAST (BILATERAL) + PIGMENTATION (BILATERAL) + INFILTRATION OF LEUCOCYTES + (BILATERAL) CALCIFICATION (BILATERAL) +	4) DAYS	1 0	CALGS	1	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
PIGMENTATION (BILATERAL) + INFILTRATION OF LEUCOCYTES + (BILATERAL) CALCIFICATION (BILATERAL) +	240	KIDNEYS		ח	RINE CAST (BILATERAL)	+	
INFILTRATION OF LEUCOCYTES + (BILATERAL) CALCIFICATION (BILATERAL) +				<u>a</u>	IGMENTATION (BILATERAL)	+	
(BILATERAL) CALCIFICATION (BILATERAL) +				I	NFILTRATION OF LEUCOCYTES	+	
CALCIFICATION (BILATERAL) +					(BILATERAL)		
				ပ	ALCIFICATION (BILATERAL)	+	

1) FATE

ANIMAL NUMBER

1210

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

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11-F3-1211 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX : STUDY NO. 83004

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		
ANIMAL 1) 4) FATE DAYS) 4) E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
NUMBER	! ! ! !		1	1 1 1 1 1 1 1 1		1 1 1 1 1 1	
۲ ۲۱۲۲	240	KIDNEYS			CHRONIC PROGRESSIVE	+	
					GLOMERULONEPHROPATHY (BILAIEKAL) PIGMENTATION (BILATERAL)	+	
					INFILTRATION OF LEUCOCYTES	+	
					(BILATERAL) CALCIFICATION (UNILATERAL)	+	
		PITUITARY GLAND	HEMORRHAGE	+			
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL	+	
					CELLS (BILAIEKAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+ +	
		MAMMARY GLAND	MASS	Ą			

2) GRADE: NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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APPENDIX 11-F3-1212

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						STUDY NO. 83004
ANIMAL 1) NUMBER NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1212 W	617	HEART			FIBROSIS	+	PAPILLARY ADENOMA
		LYMPH NODES			INCREASE OF PLASMA CELLS	+	: MAMMARY GLAND MESENCHYMOMA: KIDNEYS
		SPLEEN			HEMOSIDEROSIS	+ +	ADENOMA: PITUITARY GLAND ISLET-CELL ADENOMA
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	: PANCREAS
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER	÷		FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	+ + +	
		PANCREAS	NODULE	+	ISLET-CELL ADENOMA		
		KIDNEYS	CYST (UNILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MESENCHYMOMA (UNILATERAL)	+ + + +	
		UTERUS			PIGMENTATION	+	
		VAGINA	ENLARGEMENT	+	DILATATION OF DUCT	+ +	ga ^M

NOT DESCRITED.	SY GRADE OF MASS .	A . SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C . LARGE AND/OR MULTIPLE
2) GRADE • NEGATIVE NOT DESCRITED	L'ANTENNA INTENNA INTE	+ SLIGHT	++ , MODERATE	+++ SEVERE
THE TO IN EXTENSION				4) DAYS : AFTER START OF TREATMENT

CONTINUED 11-F3-1212 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1				: : : :		* * * * * * * * * * * * * * * * * * *	
ANIMAL 1) 4) FATE DAYS NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOG	2)3) GRADE	ICAL 2)3) HISTOPATHOLOGICAL NGS GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1212	W 617	VAGINA			INFILTRATION OF LEUCOCYTES	+	
		PITUITARY GLAND MASS REDDI	MASS REDDISH CHANGE	∢ +	ADENOMA		
		MAMMARY GLAND	MASS	A	PAPILLARY ADENOMA		
		BRAIN			PIGMENTATION DILATATION OF CEREBRAL VENTRICLE	+++	

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE 1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004

ANIMAL 1) 4) NUMBER	4) DAYS	ORGANGR	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1213 Y	072	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+ +	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	; ; ; ; ; ; ; ; ; ; ; ; ; ;	
		THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+			
		ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS	+	

2) GRADE : NEGATIVE NOT PRESENTED + '. SLIGHT ++ ' MODERATE +++ ' SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 2 2 2 1 1 1	: ! ! !	1						STUDY NO. 83004
ANIMAL 10 NUMBER FATE	1) 4) FATE DAYS	4) DAYS	ORGAN		2)3) GRADE	ніѕторатн	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1214	>-	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	! ! ! ! ! ! ! + + + +	
			CLITORAL GLAND	MASS	υ			
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS	•		VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	υ υ			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

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11-F3-1215 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1	1 1	 			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL	1) FATE	4) D A Y S	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1215	3	427	HEART			FIBROSIS	+	ADENOCARCINOMA: PITUITARY
			SPLEEN			HEMOSIDEROSIS	+ + +	GLAND
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	CELLS ++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	AL) +++	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	MASS HEMORRHAGE	A +++	ADENOCARCINOMA		
			ADRENAL GLANDS		_	PIGMENTATION (BILATERAL)	++	
			BRAIN	IMPRESSION	+			
			SPINAL CORD	•		HEMORRHAGE	+	
1)	FATE	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	KILLED IN EXTREMI	IIS 2) GRADE	: NEGATIVE N	NOT PRESENTED 3)	10	
7	DAYS	: AFTER	ER START OF TREATMENT	MENT		31	B / MEDIAL ANC. / LARGE AN	SHALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) 4) NUMBER FATE DAYS	11) FATE	4) DAYS	ANIMAL 1) 4) ORGAN GROSS PATHOLO NUMBER	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	GICAL 2)3) HISTOPATHOLOGICAL INGS GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1216	 	741	741 KIDNEYS		O & O H	HRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) IGMENTATION (BILATERAL) ALCIFICATION (BILATERAL) NFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +++	
			PITUITARY GLAND	HEMORRHAGE	+			
			MAMMARY GLAND	MASS	Ą			

4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

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ANIMAL 1) NUMBER	DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1217 Y	741	SPLEEN	ENLARGEMENT	+ +			
		LIVER	ROUGHNESS OF SURFACE	+			
		KIDNEYS			CHRONIC PROGRESSIVE	+	
					GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+	
					CALCIFICATION (BILATERAL)	+	
					INFILTRATION OF LEUCOCYTES (BILATERAL)	+ .	
		PITUITARY GLAND	ENLARGEMENT REDDISH CHANGE	+ +			
		ADRENAL GLANDS		-	ANGIECTASIA (BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CFILS (BTLATERAL)	+ +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

INTED 3) GRADE OF MASS:
A ' SMALL AND/OR SINGULAR
B ' MEDIAL AND/OR SPORADIC
C ' LARGE AND/OR MULTIPLE

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2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE: W , KILLED IN EXTREMIS

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

1 1 1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	 			 			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJO THOLOGICAL FINDI
1218	3	728	HEART				+	C-CELL CARCINOMA: THYROID
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS ADENOMA: PITUITARY GLAND
			LYMPH NODES CPULM, HILUS)			BLOOD ABSORPTION	+	FIBROADENOMA: MAMMARY GLAND
			SPLEEN		_	HEMOSIDEROSIS	+ +	
			BONE MARROW		_	PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
			LUNG		_	HISTIOCYTOSIS	+	
			LIVER	DISCOLORATION	+	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ + +	
			KIDNEYS		711 06 2	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) GLOMERULOSCLEROSIS (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	++++++	
			OVARIES		ц.	FOLLICULAR CYST (UNILATERAL)	+	

CONTINU
11-F3-1218
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1	[]]]	1						STUDY NO. 83004
ANIMAL NUMBER	FA15	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1218	A	728	UTERUS			۵	+ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + + +	ADENOMA		
			THYROID GLANDS			C-CELL CARCINOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	v	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+ +	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD		_	PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ SLIGHT

++ MODERATE

+++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1219

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS					RADE OF MASS: A SMALL AND/OR SINGULAR
1 25 GR	; ; ; ; ; ; ; ;		•		OF MASS :
ISTOPATHOLOGICAL FINDINGS	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				PRESENTED 3) G
2)3) GRADE					: NEGATIVE NOT + / SLIGHT
GROSS PATHOLOGICAL FINDINGS					2) GRADE
ORGAN GR	KIDNEYS				KILLED ON SCHEDULE
4) DAYS	741 K				, , , , , , ;
1) FATE	>-				FATE
ANIMAL	212				1)

4) DAYS : AFTER START OF TREATMENT

GRADE : NEGATIVE NOT PRE + / SLIGHT ++ / MODERATE +++ / SEVERE

PRESENTED 55 GRA
A A

S) GRADE OF MASS :
 A \ SMALL AND/OR SINGULAR
 B \ MEDIAL AND/OR SPORADIC
 C \ LARGE AND/OR MULTIPLE

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C	1	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

> NUMBER ANIMAL

1220

STUDY NO. 83004

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS						
2) GRADE	++++		+ +			
HISTOPATHOLOGICAL FINDINGS	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)		HYPERPLASIA OF CORTIC CELLS (UNILATERAL)			
2)3) GRADE	1 	+				
GROSS PATHOLOGICAL FINDINGS		HEMORRHAGE				
ORGAN	KIDNEYS	PITUITARY GLAND	ADRENAL GLANDS			
4) DAYS	741					
FATE	>-					

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

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11-F3-1221 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL	1 1 1 FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1221	3	560	MULTIPLE ORGANS	YELLOWISH CHANGE	+	MONONUCLEAR CELL, LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	
			THYMUS			АТВОРНУ	+	
			LYMPH NODES	ENLARGEMENT	+			
			(MESENI.) SPLEEN	ENLARGEMENT MASS	+ + @			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG	HEMORRHAGE	+	HEMORRHAGE	+	
			COLON	ENLARGEMENT OF PEYER'S PATCH	+ + +			
			PAROTID GLANDS			VACUOLAR DEGENERATION (BILATERAL)	+	
			LIVER	DISCOLORATION ROUGHNESS OF SURFACE	+ + + +	FATTY DEGENERATION OF HEPATIC CELLS	+ + S	
			PANCREAS	.		REGENERATIVE CHANGE	+	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL)	+ +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CONTINUED 11-F3-1221

APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1	1 1 1			1 1 1 1 1 1		: : : : : : : : : : : : : : : : : : : :	
AN IMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1221	38	560	KIDNEYS		н	INFILTRATION OF LEUCOCYTES	+	
					υ <i>κ</i>	(UNILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	+ + +	
			OVARIES		H	INCREASE OF CORPUS LUTEUM (BILATERAL)	+ +	
			UTERUS		ο.	PIGMENTATION	+	
			PITUITARY GLAND		ΣΙ	MIGRATION OF HEMOSIDERIN-LADEN CELLS HYDEDDIASTA OF CHROMOPHORE CFILS	+ +	
			ADRENAL GLANDS		: >	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+ - +	
			MAMMARY GLAND	ENLARGEMENT	+			
			HARDERIAN GLANDS BLACKISH CHANGE (BILATERAL)	BLACKISH CHANGE (BILATERAL)	+	HYPERSECRETION (BILATERAL)	+	
			BRAIN		<u>a</u>	PIGMENTATION	+	
			SPINAL CORD		۵.	PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ ' SLIGHT
++ ' MODERATE
+++ ' SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

11-F3-1222 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

								STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) ATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1222	>-	741	SPLEEN	ENLARGEMENT	+ +			
			LIVER	ENLARGEMENT	+ + +			
			PANCREAS	MASS	æ			
			KIDNEYS		J	CHRONIC PROGRESSIVE	+	
					۵.	GLOMEKULONEPHKOFAINI (BILAIEKAL) FIGMENTATION (BILATERAL)	+ +	
					- · · ·	(BILATERAL) CALCIFICATION (UNILATERAL)	- +	
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL	+	
				,	I	CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

and high

11-F3-1223 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

> NUMBER ANIMAL

1223

STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	MONONUCLEAR CELL LEUKEMIA	: MULTIPLE ORGANS POLYP: UTERUS C-CELL ADENOMA: THYROID	GLANDS						
	2) GRADE	: : : : : : : :	+	+	-	- +	+ +	+	+ +	+ + + +
	CAL	MONONUCLEAR CELL LEUKEMIA	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	BLOOD ABSORPTION	ACTIVATION OF HEMATOPOTESTS	INFILTRATION OF LEUCOCYTES	HISTIOCÝTOSIS CALCIFICATION OF VASCULAR WALL	INFILTRATION OF LEUCOCYTES (UNILATERAL)	PROLIFERATION OF BILE DUCT WITH FIBROSIS HEMORRHAGE	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2)3) GRADE			-1 - 1	• •				+ + + +	
	GROSS PATHOLOGICAL FINDINGS			ENLARGFMT			·		ROUGHNESS OF SURFACE DISCOLORATION	•
	ORGAN	MULTIPLE ORGANS	THYMUS	LYMPH NODES (PULM.HILUS) SPLEEN	BONE MARROW	NASAL CAVITY	rung	SUBLINGUAL GLANDS	LIVER	KIDNEYS
1 1 1 1 1 1	4) DAYS	720								
	FATE	3								

1) FATE : W . KILLED IN EXTREMIS

OVARIES

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

ATROPHY (BILATERAL)

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1	1 1 1	1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	HZ	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE 'OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1223	3	720	UTERUS	ENLARGEMENT	 	POLYP		
						PIGMENTATION DILATATION OF DUCT INFILTRATION OF LEUCOCYTES	+ + +	
			PITUITARY GLAND			HEMORRHAGE	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
			BRAIN		-	PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
++ , SEVERE

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11-F3-1224 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

t t t t t t t t t t t t t t t t t t t	1 1 1	1		 			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	THOLOGICAL FINDINGS	 2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1224 X	714	MULTIPLE ORGANS			ONUCLEAR CELL LEU	† 	MONONUCLEAR CELL LEUKEMIA
		THORACIC CAVITY	HEMORRHAGE	+ +			: MULTIPLE ORGANS POLYP: UTERUS
		ABDOMINAL CAVITY HEMORRHAGE	HEMORRHAGE	+ +			
		HEART			FIBROSIS	+	
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		SPLEEN	ENLARGEMENT	+ + +			
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
		NASAL CAVITY			INFLAMMATION	+	
		LUNG	CONGESTION	+ +	HISTIOCYTOSIS	· +	
		LIVER	DISCOLORATION	+	CHOLANGIOFIBROSIS FATTY DEGENERATION OF HEPATIC CELLS	+ +	
		PANCREAS			REGENERATIVE CHANGE	+	
		KIDNEYS			CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (UNILATERAL) PIGMENTATION (BILATERAL)	+ + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1224 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1	; ; ; ;			1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) TE DA		0RGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	CRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1224	x 71	714 KIE	KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+
		'Λ0	OVARIES			INCREASE OF CORPUS LUTEUM (UNILATERAL)	+
		U	UTERUS	ENLARGEMENT	+	POLYP PIGMENTATION	+
		BR	BRAIN			PIGMENTATION	+
		SP	SPINAL CORD			PIGMENTATION	+
		. 40	OPTIC NERVE			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM

	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	 					; ; ; ; ;	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HIS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICA' FINDINGS
1225	3	718	MULTIPLE ORGANS	YELLOWISH CHANGE	; ; ; ; ; ; ; ; ;	MONONUCLEAR CELL LEUKEMIA		CODE TO THE TOTAL OF THE TOTAL
			неакт			FIBROSIS	+	ADENOMOCELAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITHITADY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ENDOMETRIAL STROMAL SARCOMA: UTERUS
			LYMPH NODES	ENLARGEMENT	+	BLOOD ABSORPTION	+	
			SPLEEN	ENLARGEMENT	+ + +			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	WHITISH PATCH	+ +			
		•	LIVER	ROUGHNESS OF SURFACE	+ + +	PROLIFERATION OF BILE DUCT HEMORRHAGE	+ + +	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+++	
			OVARIES		-	ATROPHY (BILATERAL)	+	
			UTERUS	MASS ENLARGEMENT	U +	PIGMENTATION	. +	

4) DAYS : AFTER START OF TREATMENT 1) FATE : W . KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT ++ / MODERATE +++ / SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CONTINUED 11-F3-1225 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004	OGICAL 2) PROBABLE CAUSE FINDINGS GRADE OF DEATH OR MAJOR PATHOLOGICAL STREET	1	F LEUCOCYTES + ROMAL SARCOMA	F LEUCOCYTES +	+	VACUOLAR DEGENERATION OF CORTICAL + CELLS (UNITATERAL)	HYPERPLASIA OF MEDULLARY CELLS + (UNILATERAL)	+
	HISTOPATHOLOGICAL FINDIN	! ! ! ! ! ! !	INFILTRATION OF LEUCOCYTES ENDOMETRIAL STROMAL SARCOMA	INFILTRATION OF LEUCOCYTES	ADENOMA CYST	/ACUOLAR DEGENE CELLS (UNILATE	HYPERPLASIA OF CUNILATERAL)	PIGMENTATION
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2)3) GRADE	 			+		<u></u>	Δ.
	Ъ.				ENLARGEMENT			
	ORGAN	UTERUS		VAGINA	PITUITARY GLAND	ADRENAL GLANDS		BRAIN
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	ANIMAL 1) 4) FATE DAYS NUMBER	718						
! ! ! !	L 1) FATE R	3						
1 1 1 1 1	ANIMAL NUMBER	1225						

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

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. CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX: 100 PPM FEMALE

STUDY NO. 83004

ANIMAL FANUMBER	1) 4) FATE DAYS	4, ORGAN YS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1226	W 732	HEART			FIBROSIS	+	PHEOCHROMOCYTOMA: ADRENAL
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY
		SPLEEN			HEMOSIDEROSIS	++	: KIDNEYS ULCER: STOMACH
		BONE MARROW		•	FATTY MARROW	+	FIBROADENOMA: MAMMARY GLAND
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		STOMACH			ULCER	+ + +	
		LIVER	YELLOWISH CHANGE	+ + +	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	+ + + + +	
		PANCREAS			DECREASE OF ZYMOGEN GRANULES	+ +	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+ + +	INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + + +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND	HEMORRHAGE	+	GRATION OF HEMOSIDERIN-L	+	
1 (1	A	FATE: W . KILLED IN EXTREMIS.	2) GRADE	EG/	PRESENTED 3) GRADE	OF MASS: SMALL AND/OR MEDIAL AND/OF	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
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11-F3-1226	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1	 	1 1 1 1			! ! ! ! ! !			STUDY N
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE		2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1226	Α	W 732	PITUITARY GLAND			CELLS HYPERPLASIA OF CHROMOPHOBE CELLS	! ! ! ! ! ! ! ! ! !	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+ +	
			MAMMARY GLAND	MASS	ပ	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SIUDY NO. 83004
ANIMAL F. NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	S	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1227	3	575	HEART			FIBROSIS	+	MEDULLOBLASTOMA: BRAIN
			SPLEEN			HEMOSIDEROSIS	+ + +	ADENOMA: PITUITARY GLAND
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA HYPERPLASTIC NODULE	+ + + + +	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++	ADENOMA		
			MANMARY GLAND		J	DILATATION OF GLAND	+ +	
			BRAIN	IMPRESSION HEMORRHAGE EDEMA	+ + +	MEDULLOBLASTOMA		

	3) GRADE OF MASS:	A / SMALL AND/OR SINGULAR	B . MEDIAL AND/OR SPORADIC	C . LARGE AND/OR MULTIPLE
	2) GRADE : NEGATIVE NOT PRESENTED	+ SLIGHT	++ / MODERATE	+++ SEVERE
1	IN THIE . W . NICLED IN EXIKEMIS			4.) DAYS : AFIER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004

ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1228 Y	741	SPLEEN	LARGEM	+	. 1 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !		
		KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL)		
		MAMMARY GLAND	MASS		CALCIFICATION (UNILATER,	AL) +	
						·	
·							
1) FATE:	\ \ :	KILLED ON SCHEDULE		: NEGATIVE NOT	NOT PRESENTED	3) GRADE OF MASS	
4) DAYS:	: AFTE	4) DAYS : AFTER START OF TREATMENT		+ / SLIGHT ++ / MODERA +++ / SEVERE	SLIGHT MODERATE SEVERE	A , SMALL AND B , MEDIAL AN C , LARGE AND	SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1	1	1 1			: : : : :			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	АТНО	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1229	>-	741	LIVER	YELLOWISH CHANGE	+			
			KIDNEYS	ROUGHNESS OF SURFACE	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+++	
						FIGHTON (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + +	
			OVARIES	CYST (UNILATERAL)	+			
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS			PHEOCHROMOCYTOMA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL)	+ +	
			MAMMARY GLAND	MASS	ပ			

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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11-F3-1230 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM

1	1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1230	2	209	ABDOMINAL CAVITY HEMORRHAGE	HEMORRHAGE	+			MALIGNANT FIBROUS HISTIO-
			PERITONEUM	MASS	ပ	MALIGNANT FIBROUS HISTIOCYTOMA, PRIMARY		CYTOMA: PERITONEUM
			SPLEEN			ATROPHY HEMOSIDEROSIS	+ + + + + +	
			BONE MARROW			CONGESTION	÷ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	MASS	4	MALIGNANT FIBROUS HISTIOCYTOMA. METASTASIS		
			KIDNEYS			PIGMENTATION (BILATERAL) GLOMERULOSCLEROSIS (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) CALCIFICATION (UNILATERAL)	++ + +	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

	1 1 1	1 1 1			1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE		2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1231	>-	741	SPLEEN	ENLARGEMENT	; ; ; ; ; ; ; ;		! ! ! ! ! !	
			KIDNEYS			CHRONIC PROGRESSIVE	+	
						SCOURTHAND OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
			OVARIES	CYST (UNILATERAL)	+ + +			
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + +			
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		: ! !			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO.
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOG	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1232	> -	741	741 KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ ++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + + +			

1) FATE: Y / KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT ++ / MODERATE +++ / SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1			1			STUDY NO. 83004
					1 1 1 1 1 1 1 1 1 1 1 1		1 1
ANIMAL 1) 4)	(7 4)	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHO! OGICA!	ć	1 4 4
NUMBER	T DAYS		FINDINGS	GRADE	SUIGNIA	GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1			1
1233 X	546	MULTIPLE ORGANS		2	MONONUCLEAR CELL LEUKEMIA		
		SPLEEN	ENLARGEMENT	++			HONDUNCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
		NASAL CAVITY		H	INFILTRATION OF LEUCOCYTES	+	
		LIVER	DISCOLORATION	+		-	
		KIDNEYS		n	URINE CAST (BILATERAL)	4	
`				T O	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

1	1	1						STUDY NO. 83004
ANIMAL 1) FATE NUMBER	1) FATE	4) DAYS	ORGAN	HUNI)3) DE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1234	>-	242	LUNG	LE	; ; ; ; ; ; ; ; ;			
			KIDNEYS	<i>:</i>		CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ +++	
			PITUITARY GLAND HEMORRHAGE	HEMORRHAGE	+			
			SKIN (SUBCUTIS)	MASS	æ			
			MAMMARY GLAND	MASS	æ			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE :

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ SLIGHT
++ MODERATE
+++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE: W , KILLED IN EXTREMIS

11-F3-1235 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1	1	1			1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1235	3	999	HEART			THROMBOENDOCARDITIS	+	ADENOCARCINOMA: CLITORAL
			LYMPH NODES	ENLARGEMENT	+			GLAND
			SPLEEN	ENLARGEMENT	+ + +	EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS EDEMA	+ + + +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			FUNG	DISCOLORATION	+, +			
			LIVER	DISCOLORATION	+ + +	FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	
			CLITORAL GLAND	MASS	ပ	ADENOCARCINOMA		
			PITUITARY GLAND	ENLARGEMENT	+	CYST	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) HYPERPLASIA OF MEDULLARY CELLS (BILATERAL)	+ +	

Av. J.

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

	!	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			: : : :			STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) :ATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	C A D I	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1236	3	727	HEART			FIBROSIS	+	O Y O S E N I S O Y O
			SPLEEN			АТКОРНҮ	+ +	: ORAL CAVITY
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	HEMORRHAGE	+	HEMORRHAGE	+	
			ORAL CAVITY	MASS	A	PYOGENIC STOMATITIS	+ + +	
			LIVER	DISCOLORATION	+			
			KIDNEYS	ROUGHNESS OF SURFACE	+ +	CHRONIC PROGRESSIVE	+ + +	
						SCOMENDENCY (BILAIERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ + +	
					Ü	(BILATERAL) CALCIFICATION (BILATERAL)	+	
			OVARIES		O	CYST (UNILATERAL)	+	

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE 1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004	2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR	PATHOLOGICAL FINDINGS	+	RAL) + +	ICAL ++ ++
	2)3) HISTOPATHOLOGICAL RADE FINDINGS		CHRONIC PROGRESSIVE	CALCIFICATION (BILATERAL) CALCIFICATION (UNILATERAL)	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) ANGIECTASIA (UNILATERAL)
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GROSS PATHOLOGICAL 2)3) FINDINGS GRADE				
	ORGAN		KIDNEYS		ADRENAL GLANDS
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	ANIMAL 1) 4) FATE DAYS NUMBER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Y 742		
	ANIMAL F. NUMBER	1 1 1 1 1 1 1 1 1	1237		

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

! ! ! ! !	! ! ! !	 			 		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1238	> -	742	LIVER	REDDISH CHANGE	+ +			
			KIDNEYS		n	URINE CAST (BILATERAL)	+	
					α.	PIGMENTATION (BILATERAL)	+	
					I	INFILTRATION OF LEUCOCYTES	+	
						(BILATERAL)		
					2	REGENERATIVE RENAL TUBULE	+	
						(UNILATERAL)		
						CALCIFICATION (UNILATERAL)	+	
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

1) FATE : Y . KILLED ON SCHEDULE 2

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

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ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1239	>	742	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+ + +	
			MAMMARY GLAND	MASS	8			
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			
			BRAIN	IMPRESSION	+			

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE 1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

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3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

100 PPM LEVEL AND SEX :

FEMALE

		1		! ! ! ! ! ! !	STUDY NO. 83004
ANIMAL 1) 4) ORGAN FATE DAYS NUMBER-	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
1240 Y 742 LIVER	WHITISH PATCH	+			
KIDNEYS		=	HRINE CAST (BILLATEDAL)		
		α.	PIGMENTATION (BILDTERAL)	+ -	
		Ü	CALCIFICATION (BILATERAL)	+ +	
		H	INFILTRATION OF LEUCOCYTES	- +	
			(BILATERAL)	-	
		æ. 1	REGENERATIVE RENAL TUBULE (UNILATERAL)	+	

VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)

ADRENAL GLANDS

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

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11-F3-1241 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1						STUDY NO. 83004
ANIMAL 1) NUMBER FATE	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1241	×	729	MULTIPLE ORGANS		! ! ! !	MONONUCLEAR CELL LEUKEMIA		LEIOMYOSARCOMA: UTERUS
			LYMPH NODES	ENLARGEMENT	+			MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+ + +			
			LIVER	NODULE YELLOWISH CHANGE	+ + + +	FATTY DEGENERATION OF HEPATIC CELLS	+ + s	
			KIDNEYS			URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+ + +	
			UTERUS	MASS	ပ	LEIOMYOSARCOMA		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + + + +			
			BRAIN	IMPRESSION	+			

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1) FATE : X , FOUND DEAD

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

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11-F3-1242 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1	1	!!!!!!!			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SIUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) ADE	HISTOPATHOLOGICAL FINDINGS	Z) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1242	>		742 KIDNEYS		 	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	! ! ! ! ! ! + + + +	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	В			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004

ANIMAL 1) 4) FATE DAYS NUMBER	4) DAYS	ORGAN	OGICAL	2)3) GRADE	2)3) HISTOPATHOLOGICAL 2)3 GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1243 X		HEART I TVFR		 	FIBROSIS	i 	HEMANGIOMA: UTERUS
		KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + ÷	
		UTERUS	MASS	υ υ	HEMANGIOMA		

1) FATE : X , FOUND DEAD

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT ++ , MODERATE +++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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11-F3-1244 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1				; ! ! ! !			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1244	3	609	LYMPH NODES	ENLARGEMENT	 	INFLAMMATION	+	SQUAMOUS CFIL CARCINOMA
			SPLEEN	ENLARGEMENT	+ +	EXTRAMEDULLARY HEMATOPOIESIS	+ +	NIXS:
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
			LUNG			ADENOMATOSIS	+ + +	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ + + + +	FATTY DEGENERATION OF HEPATIC CELLS +++	LS +++	
			KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
						VILLA CAST (BILATERAL) CALCIFICATION (BILATERAL)	+ +	
			PITUITARY GLAND	HEMORRHAGE		CYST	+ + +	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
	•	-,	SKIN	MASS	8	SQUAMOUS CELL CARCINOMA		

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]] ! !	STUDY NO. 83004	
ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	
		! ! ! ! ! !		! ! ! ! ! !		
KIDNEYS			CHRONIC PROGRESSIVE	+++		
			GLOMERULONEPHROPATHY (BILATERAL)			
			PIGMENTATION (BILATERAL)	+		
			CALCIFICATION (BILATERAL)	+		

1) 4) FATE DAYS

ANIMAL NUMBER 272

1245

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++, MODERATE +++, SEVERE

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11-F3-1246
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

	 	† † † †			!		YOUTS	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1246	> -	743	743 KIDNEYS		JEH & O	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) CALCIFICATION (UNILATERAL)	+++ + +	
			CLITORAL GLAND	MASS	А			
			ADRENAL GLANDS		,	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

1 1 1	1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	PATHOLO FIND	2)3) GRADE	ATHOLOGICAL FINDIN	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1247	> -	243	SPLEEN		++		1 1 1 1 1 1 1	
			LIVER	NODULE	+			
			KIDNEYS		J	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
					<u> </u>	PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
					0	'EILATERAL' CALCIFICATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS		ď	ANGIECTASIA (UNILATERAL)	+ +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE ++ SEVERE

SENTED 3) GRADE OF MASS:
A \ SMALL AND/OR SINGULAR
B \ MEDIAL AND/OR SPORADIC
C \ LARGE AND/OR MULTIPLE

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APPENDIX 11-F3-1248

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

ANIMAL 1) 4) ORGAN GROSS PATHOLOGICAL 2)3) HISTOPATHOLOGICAL 2)5 PRO FINDINGS GRADE FINDINGS GRADE OF DE PATHOLOGICAL 2)5 PRO OF DE CHRONIC PROGRESSIVE 4 CHRONIC PROGRESSIVE 5 CHRONIC PROGRE
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MIDNEYS I
1) 4) ORGAL
ANIMAL 1) 4) NUMBER

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

: 2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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APPENDIX 11-F3-1249

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

1	1 1 1	1 1 1			! ! ! ! ! !			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	HZ I	2)3) GRADE	HISTOPA	GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1249	×	242	MULTIPLE ORGANS			MYELOCYTIC LEUKEMIA		MYELOCYTTC LEUKEMTA
			неакт			FIBROSIS	+	: MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+ + +			
			LUNG	HEMORRHAGE	+ +			
			LIVER	ENLARGEMENT NODULE	+ + + +	PROLIFERATION OF BILE DUCT	+	
			KIDNEYS		_ `	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	CALCIFICATION (BILATERAL) HEMORRHAGE	+ +	
			ADRENAL GLANDS	ENLARGEMENT (BILATERAL)	+	CONGESTION (BILATERAL)	+ +	
			MAMMARY GLAND		-1 -1	HYPERPLASIA	+	
			BRAIN		<u></u>	HEMORRHAGE	+	

1) FATE : X , FOUND DEAD

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

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11-F3-1250 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1			STUDY NO. 83004
ANIMAL 1)	17	(7)	ORGAN	GROSS PATHOLOGICAL	2)3)	PATHOLOGICAL		
NUMBER	- I	U A Y		FINDINGS	GRADE	FINDINGS	GRADE	PRUBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL STERSTOCE
				1 1 1 1 1 1 1 1	 		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TITLE TENENT TENENTS
1650	·	745	LIVER	NODULE	+			
			KIDNEYS			CHRONIC PROGRESSIVE	+ +	
						GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
						(BILATERAL)		
			PITUITARY GLAND	HEMORRHAGE	+			
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+			
		7	ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL	+	
						מונוס יסודרט רויטרי		

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

STUDY NO. 83004	2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR	PATHOLOGICAL FINDINGS		
1 1	GR	i		+ + + +
	HISTOPATHOLOGICAL FINDINGS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	2)3) GRADE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+	
	GROSS PATHOLOGICAL FINDINGS		VODULE	
	Ü		N	
	ORGAN		Y 743 LIVER	KIDNEYS
! ! !	4) DAYS	! ! !	243	
: ! !	1) FATE	1	>-	
	ANIMAL 1) 4) FATE DAYS NUMBER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1251	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 100 PPM LEVEL AND SEX :

1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ;			1		 	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	FATE	4) DAYS	ORGAN	HOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1252	>-	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+ ++ +	
			PITUITARY GLAND	HEMORRHAGE	+			
			SKIN (SUBCUTIS)	NODULE	+			
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1					1	STUDY NO. 83004
ANIMAL NUMBER	1) FATE D	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUS OF DEATH OR MAJ
1301	۲ ۲	072	HEART		u.	FIBROSIS	+	
			THYMUS		π	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	÷	
			LYMPH NODES		B	BLOOD ABSORPTION .	+	
			LYMPH NODES (PULM, HILLIS)		ω .	BLOOD ABSORPTION	+	
			SPLEEN		± ω	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX		I	INFILTRATION OF LEUCOCYTES	+	
			LUNG		ΞĪΟ	HEMORRHAGE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ + +	
			LIVER		C F F F F F F F F F F F F F F F F F F F	CHOLANGIOFIBROSIS INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA GRANULATION FOCAL ATROPHY OF HEPATIC CELLS	++++++	
			PANCREAS		I	INFILTRATION OF LEUCOCYTES	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

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11-F4-1301
APPENDIX

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	! ! !	: : :			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		; ; ; ; ;	STUDY NO. 83004
ANIMAL FA NUMBER	1) FATE [4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1301	, - ≻ -	072	PANCREAS		ď	ပ	+	
			KIDNEYS		поо н	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + + +	
			URINARY BLADDER		H	INFILTRATION OF LEUCOCYTES	+	
			UTERUS		а.	PIGMENTATION	+	
			PITUITARY GLAND		ΞO	HYPERPLASIA OF CHROMOPHOBE CELLS CYST	+ + +	
			ADRENAL GLANDS	·		VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS		H	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN		Δ.	PIGMENTATION	+	
			SPINAL CORD		a.	PIGMENTATION	+	

3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR	B / MEDIAL AND/OR SPORADIC	C / LARGE AND/ÖR MULTIPLE	
2) GRADE : NEGATIVE NOT PRESENTED	+ SLIGHT	++ / MODERATE	+++ SEVERE	
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT	

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11-F4-1302 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

ANIMAL 1) NUMBER	.) 4.) E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1302 X	621	THORACIC CAVITY ABDOMINAL CAVITY	PLEURAL FL ASCITES	l		i 1 1 1 1 1 1 1 1	SQUAMOUS CELL CARCINOMA : CLITORAL GLAND
		HEART		u.	FIBROSIS	+	
		THYMUS		Ŧ	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		A	ANGIECTASIA	+ +	
		SPLEEN		HE C A	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS ATROPHY	+ + +	
		BONE MARROW		AC	ACTIVATION OF HEMATOPOIESIS	+ + +	
		NASAL CAVITY		HIECC	CONGESTION EDEMA INFILTRATION OF LEUCOCYTES HYPERPLASIA OF MUCOSAL EPITHERIUM	+ + + +	
		LARYNGOPHARYNX		NI	INFILTRATION OF LEUCOCYTES	+	
		rnng		CA CO CO	CALCIFICATION OF VASCULAR WALL CONGESTION MIGRATION OF MACROPHAGE IN ALVEOLI	=0LI +	
		LIVER		FA	FATTY DEGENERATION OF HEPATIC (CELLS ++	
1) FATE		FOUND DEAD	2) GRADE:	NEGATIVE + SITG	OT PRESENTED 3)	- DE	
4) DAYS	••	AFTER START OF TREATMENT	+			B / MEDIAL ANC. / LARGE ANG	SHALL AND/OK SINGULAK MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

3) GRADE OF, MASS:

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11-F4-1302
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

	Nega	GROSS PATHOLOGICAL	(2/2)	HISTOPATHOLOGICAL		PROBABLE CAUSE
		FINDINGS	GRADE	FINDINGS	GRADE	OF DEATH OR MAJOR
						PATHOLOGICAL FINDING
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			

				1 1 1 1			
ANIMAL 1) 4) FATE DAYS NUMBER	4) AYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1302 X 62	621 1	LIVER			ANGIECTASIA SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS CONGESTION	* * + + +	
	_	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL) IMPRESSION (UNILATERAL)	+ +	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (UNILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL).	* * *	
	J	OVARIES			CONGESTION (BILATERAL)	+	-
	_	UTERUS			PIGMENTATION	+	
	_	VAGINA			АТКОРНҮ	+ +	
	•	CLITORAL GLAND	MASS	ر ن	SQUAMOUS CELL CARCINOMA		
		ADRENAL GLANDS			CONGESTION (BILATERAL) HEMORRHAGE (UNILATERAL) ANGIECTASIA (BILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	* * * * * *	
	-	MUSCLE (Q.			INFILTRATION OF LEUCOCYTES	+	
	-,	FEMORIS) SKIN (SUBCUTIS)	EDEMA	* + *	,		

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

11-F4-1302 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS STUDY NO. 83004 2) GRADE HISTOPATHOLOGICAL FINDINGS PIGMENTATION PIGMENTATION 2)3) GRADE GROSS PATHOLOGICAL FINDINGS SPINAL CORD ORGAN BRAIN 1) 4) FATE DAYS 621 ANIMAL NUMBER 1302

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11-F4-1303 APPENDIX

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· CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

> !!!!!!!!!!! NUMBER ANIMAL

1303

						! ! ! ! !	STUDY NO. 83004
L 1) R FATE	DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	TOPAT	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
>-	240	HEART		<u>.</u>	FIBROSIS	+	NO SIGNIFICANT LESION
		THYMUS		<u></u>	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		u.	BLOOD ABSORPTION	+	
		(PULM.HILUS) SPLEEN		<u></u>	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+ +	
		BONE MARROW		<u>+</u>	HYPOHEMATOPOIESIS	+	
		NASAL CAVITY		7	INFILTRATION OF LEUCOCYTES	+	
		LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+ +	
		LIVER			PROLIFERATION OF BILE DUCT	+	
						+ + + + + + + + + + + + + + + + + + +	
		PANCREAS		1	ATROPHY OF PANCREATIC ACINUS	+ +	
		KIDNEYS		ш.	PIGMENTATION (BILATERAL)	++	

1) FATE: Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED
11-F4-1303
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	· HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1303 Y	240	KIDNEYS				: : : : : : :	
					REGENERATIVE RENAL TUBULE	+	
					URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES	+ +	
				C	(UNICATERAL) CALCIFICATION (BILATERAL)	+	
		OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	
		UTERUS		ш.	PIGMENTATION	+	
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		SKIN		r	INFILTRATION OF LEUCOCYTES	+	
		HARDERIAN GLANDS		I	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN		Δ.	PIGMENTATION	. +	
		SPINAL CORD		ο.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : 4) DAYS : AFTER START OF TREATMENT +

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

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11-F4-1304 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

						STUDY NO. 83004
ANIMAL 1) 4) NUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	LOGICAL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1304 Y 740	HEART			FIBROSIS		
	THYMUS		т.	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLANDS
	LYMPH NODES (PULM.HILUS)		ш	BLOOD ABSORPTION	+	
	SPLEEN		т ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIES	++ * + SIS	
	NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
	LUNG		HO	INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	4 4+ ++	,
	LIVER		шσн	FATTY DEGENERATION OF HEPATIC SMALL GRANULOMA INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS	TIC CELLS + + + + + + + + + + + + + + + + + +	
	PANCREAS		I	INFILTRATION OF LEUCOCYTES	+	
	KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILA	(A) ++ (AL) ++ (BILATERAL) +	
	UTERUS		a.	PIGMENTATION	+	
	PITUITARY GLAND		Ŧ	HYPERPLASIA OF CHROMOPHOBE	CELLS ++	
1) FATE : Y	KILLED ON SCHEDULE	E 2) GRADE :	NEGATIVE NOT	PRESENTED	GRADE	
4) DAYS : AFTER	ER START OF TREATMENT			ATE .	A . SMALL ANI B . MEDIAL AN C . LARGE ANI	SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

CONTINUED	
11-F4-1304	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL	1) FATE	4) DAYS	ORGAN	2)3) GRADE	OGICAL 2)3) HISTOPATHOLOGICAL DINGS GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1304	>-	072	PITUITARY GLAND	1 1 1 1 1 1 1 1	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN	++	
			ADRENAL GLANDS	<i>></i> u	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)	+	
			BRAIN	a,	PIGMENTATION	+	
			SPINAL CORD	a.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
++ , SEVERE

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11-F4-1305 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 1 1	1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		: : : : : :			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1305 W	069	MULTIPLE ORGANS			MYELOCYTIC LEUKEMIA		ADENOCARCINOMA: CLITORAL
		HEART			FIBROSIS	+	GLAND MYELOCYTIC LEUKEMIA
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS ADENOMA: PITUITARY GLAND PAPILLARY ADENOMA: LUNG
		SPLEEN	ENLARGEMENT MASS	+ + +	CONGESTION ATROPHY	+ + + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			PAPILLARY ADENOMA HISTIOCYTOSIS	+	
		LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ + + +	FATTY DEGENERATION OF HEPATIC CELLS HEMORRHAGE INFILTRATION OF LEUCOCYTES FOCAL NECROSIS GRANULAR DEGENERATION MACROPHAGE MIGRATION IN PERIVASCULAR AREA FIBROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + + + + + + + + + + + + + + + +	
	•	PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			PIGMENTATION (BILATERAL)	+ + +	

5)	
EXTREMIS	TREATMENT
N	0 F
KILLED	START
X .	AFTER
FATE	DAYS
1)	7 >

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT ++ MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR 'SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULIPLE

CONTINUED 11-F4-1305 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL 1) FATE NUMBER	DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1305 W	069	KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		URINARY BLADDER	EXPANSION	+			
		OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		UTERUS			DILATATION OF DUCT	+ +	
		CLITORAL GLAND	MASS .	٠ ,	AD ENOCARCINOMA		
		PITUITARY GLAND	ENLARGEMENT	++	ADENOMA		
		THYROID GLANDS			ENLARGEMENT OF FOLLICLE (UNILATERAL)	++ (
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+ + + + +	
					HEMUKKHAGE (BILA!EKAL)	 -	
		BONE (FEMUR)			OSTEOSCLEROSIS	+	
		EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+ +	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD			PIGMENTATION	+	
1) FATE	3	KILLED IN EXTREMIS	11S 2) GRADE	EG/	NOT PRESENTED 3) GRADE	GRADE OF MASS A , SMALL AND	OF MASS: SMALL AND/OR SINGULAR
4) DAYS	YS : AFTER	ER START OF TREATMENT		++ , MOD +++ , SEV	MODERATE B SEVERE C	MEDIAL AN LARGE AND	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

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11-F4-1306 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

1000 PPM FEMALE LEVEL AND SEX :

STUDY NO. 83004

					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1306	, >-	240	HEART		1 1 1 1 1 1 1	INFILTRATION OF LEUCOCYTES FIBROSIS	 	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	÷ +	
			LYMPH NODES			BLOOD ABSORPTION	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX		_	INFILTRATION OF LEUCOCYTES HYPERSECRETION	+ +	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			SUBLINGUAL			DILATATION OF DUCT (UNILATERAL)	\$	
			GLANDS PAROTID GLANDS			INFILTRATION.OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	•		FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+ + v	
				•		FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + +	
			PANCREAS		Γ	INFILTRATION OF LEUCOCYTES	*	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1306	
APPENDIX	•

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

		; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;		1			STUDY NO. 83004
ANIMAL 1) KUMBER	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1306 Y	072	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	! ! ! ! ! ! ! !	
					INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
					PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	
		UTERUS		ш	PIGMENTATION	+	
		PITUITARY GLAND		105	HEMORRHAGE CYST MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + +	
		ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		HARDERIAN GLANDS		I	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN		ď	PIGMENTATION	+	
		SPINAL CORD		۵	PIGMENTATION	+	

SCHEDULE	
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KILLED	
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FATE	
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... 2) GRADE : NEGATIVE NOT PRESENTED + '. SLIGHT ++ ' MODERATE +++ ' SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	 			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HOL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1307	>-	240	MULTIPLE ORGANS		_	ONUCL	 	
			HEART			FIBROSIS	+	PHEOCHROMOCYTOMA: ADRENAL
			THYMUS		·	ТНҮМОМА		C-CELL ADENOMA: THYROID
			LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION	+	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS	+	
			BONE MARROW		4	ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY		F -1	INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX		I	INFILTRATION OF LEUCOCYTES	+	
			LUNG		S	CALCIFICATION OF VASCULAR WALL	+	
			SUBL INGUAL GLANDS		H	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	ENLARGEMENT	+	FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS PROLIFERATION OF BILE DUCT WITH FIBROSIS	+ + + + +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CONTINUED 11-F4-1307 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1	1 1			 			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1307	>	240	LIVER		 		 	
						FOCAL NECROSIS	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + + +	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	·
			THYROID GLANDS	ENLARGEMENT (BILATERAL)	+	C-CELL ADENOMA (BILATERAL)		
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL) HEMORRHAGE (BILATERAL) ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ + +	
			BRAIN		•	PIGMENTATION	+	
			SPINAL CORD		α.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

STUDY NO. 83004	OGICAL 2) PROBABLE CAUSE FINDINGS GRADE 'OF DEATH OR MAJOR PATHOLOGICAL STORY		EUKEMIA FIBROADENOMA: MAMMARY	GLAND + C-CELL ADENOMA: THYROTO	THELIAL + MONONUCLEAR CELL LEUKEMIA : MILLITIBLE OCCASE	0.4520 DILITION . +	+ ATOPOIESIS ++			
	2)3) HISTOPATHOLOGICA GRADE FINDI		MONDOLEAK CELL LEUKEMIA	FIBROSIS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	BLOOD ABSORPTION	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS ATROPHY	INFILTRATION OF LEU	INFILTRATION OF LEUCOCYTES HYPERSECRETION	INFILTRATION OF LEUCOCYTES HYPERSECRETION HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL
	GROSS PATHOLOGICAL FINDINGS	SN								
	ORGAN	MULTIPLE ORGANS		HEART	THYMUS	LYMPH NODES (PULM.HILUS)	SPLEEN	NASAL CAVITY	NASAL CAVITY LARYNGOPHARYNX	NASAL CAVITY LARYNGOPHARYNX LUNG
; ; ; ; ; ; ; ;	1) 4) TE DAYS	1 722								
! ! ! ! ! !	ANIMAL 1) FATE NUMBER	1308 W								

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ SLIGHT
++ MODERATE
+++ SEVERE

3) GRADE OF MASS:
A 'SMALL AND/OR SINGULAR
B 'MEDIAL AND/OR SPORADIC
C 'LARGE AND/OR MULTIPLE

CONTINUED
11-F4-1308
APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

ANIMAL 1) FATE NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1308	W 722	LIVER				 	
					FATTY DEGENERATION OF HEPATIC CELLS	LS +	
		KIDNEYS			CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES	. + +	
					PIGMENTATION (BILATERAL) CONTROL OF BASEMENT MAMBRANE	+ + +	,
					(BILATEKAL) REGENERATIVE RENAL TUBULE	.+	
					VINE CAST (BILATERAL) GLOMERULOSCLEROSIS (BILATERAL)	+ +	
		URINARY BLADDER	EXPANSION	+			
		UTERUS			PIGMENTATION DILATATION OF DUCT	+ +	
		THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)		
		ADRENAL GLANDS			EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL)	+	
		BONE (FEMUR)		-	OSTEOSCLEROSIS	+ +	
		MAMMARY GLAND	MASS	ပ	FIBROADENOMA		
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FAIE : W . KILLED IN EXTREMIS

CONTINUED	
11-F4-1308	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PROBABLE CAUSE OF DEATH OR MAJOR DATHOLOGICAL FINDINGS			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2) GRADE	1	+	+
	HISTOPATHOLOGICAL FINDINGS		PIGMENTATION	PIGMENTATION
	2)3) GRADE		P.	P.
1	GROSS PATHOLOGICAL FINDINGS			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ORGAN		BRAIN	SPINAL CORD
1	1) 4) FATE DAYS	1	W 722	
1 1 1 1	1) FATE	1	3	
1 1 1 1 1 1 1 1	ANIMAL 1) 4) FATE DAYS	NUMBER	1308	

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W . KILLED IN EXTREMIS

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11-F4-1309 APPENDIX

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CHRONIC AND CARCINGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1) FATE						!!!!!!!!!	
NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
				 		!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	
1309 w	732	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		FIBROADENOMA: MAMMARY
		HEART			FIBROSIS	+	
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
		LYMPH NODES	ENLARGEMENT	+			
		SPLEEN	ENLARGEMENT NODULE	+ + + +	CAPSULITIS HEMOSIDEROSIS	+ +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG	•		GRANULATION CALCIFICATION OF VASCULAR WALL	+ +	
		ESOPHAGUS			HYPERKERATOSIS	+	
		SТОМАСН			ЕДЕМА	+	
		LIVER	ENLARGEMENT YELLOWISH CHANGE	+ +	FATTY DEGENERATION OF HEPATIC CELLS CONGESTION CHOLANGIOFIBROSIS	+ + +	
	_	KIDNEYS		5	CALCIFICATION (BILATERAL)	+ .	

1) FATE : W . KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1309 CONTINUED

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004	PATHOLOGICAL FINDINGS											
		+ +	+	+ + +	+ + +	+ + +	+	+ + +	+		+	+
		URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES	(BILATERAL) REGENERATIVE RENAL TUBULE	VOLLATERAL) PIGMENTATION (BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL)	DILATATION OF DUCT	HYPERPLASIA OF CHROMOPHOBE CELLS HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	HYPERPLASIA OF C-CELLS (BILATERAL)	VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	OSTEOSCLEROSIS	FIBROADENOMA	CALCIFICATION, SCLERA (UNILATERAL)	INFILTRATION OF LEUCOCYTES (BILATERAL)
2)3) GRADE					+	± ± 2	_	>	0	ш.	. ^U	H
GROSS PATHOLOGICAL FINDINGS					ENLARGEMENT							·
 ORGAN	KIDNEYS				UTERUS	PITUITARY GLAND	THYROID GLANDS	ADRENAL GLANDS	BONE (FEMUR)	MAMMARY GLAND	EYE BALLS	HARDERIAN GLANDS
4) DAYS	732											
ANIMAL 1)	1309 W											

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ SLIGHT
++ MODERATE
+++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS: .
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1309	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

> NUMBER ANIMAL

1309

STUDY NO. 83004

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS								
2) GRADE	! ! ! ! ! ! ! ! ! !	· + +	+					
	. д	HEMORRHAGE PIGMENTATION	PIGMENTATION					
2)3) GRADE	! !	++	<u>.</u>				•	
GROSS PATHOLOGICAL FINDINGS		HEMORRHAGE					·	
ORGAN	HARDERIAN GLANDS	BRAIN	SPINAL CORD					
4) DAYS	732							
1) FATE	Μ							

1) FATE: W , KILLED IN EXTREMIS

4) DAYS : AFIER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

ANIMAL 13 43 ORGAN GROSS PATHOLOGICAL 233) NUMBER FATE DAYS LYMPH NODES LYMPH NODES (PULM.HILUS) SPLEEN NASAL CAVITY LUNG KIDNEVS KIDNEVS THYMUS SPLEEN ANITISH PATCH + LUNG KIDNEVS KIDNEVS SPACHOULE		SIUDY NO. 83004
THYMUS LYMPH NODES (PULM.HILUS) SPLEEN NASAL CAVITY LUNG CECUM LIVER LIVER KIDNEYS 3. GRADE : 1. KILLED ON SCHEDULE 2. GRADE :	2)3) HISTOPATHOLOGICAL GRADE FINDINGS GR	2) PROBABLE CAUSE DE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
LVMPH NODES (PULM.HILUS) SPLEEN NASAL CAVITY LUNG CECUM LIVER KIDNEYS FATE: Y / KILLED ON SCHEDULE 22) GRADE:	FIBROSIS INFILTRATION OF L	FIBROADENOMA: MAMMARY GLAND
LYMPH NODES (PULM.HILUS) SPLEEN NASAL CAVITY LUNG WHITISH PATCH LIVER KIDNEYS FATE: Y , KILLED ON SCHEDULE 2) GRADE:	HYPERPLASIA OF EPITHELIAL + RETICULUM CELLS	
SPLEEN NASAL CAVITY LUNG CECUM LIVER KIDNEYS FATE: Y / KILLED ON SCHEDULE 2) GRADE:	BLOOD ABSORPTION +	
LUNG WHITISH PATCH CECUM LIVER KIDNEYS FATE: Y , KILLED ON SCHEDULE 2) GRADE:	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS +	
CECUM LIVER KIDNEYS FATE: Y / KILLED ON SCHEDULE 2) GRADE:	FOREIGN BODY GRANULOMA INFILTRATION OF LEUCOCYTES ++ CALCIFICATION	
CECUM LIVER KIDNEYS FATE: Y , KILLED ON SCHEDULE 2) GRADE:	+ PLEURISY INFILTRATION OF LEUCOCYTES + 0SSEOUS TISSUE + CALCIFICATION OF VASCULAR WALL +	
KIDNEYS FATE : Y , KILLED ON SCHEDULE 2) GRADE :	HEMORRHAGE +	
KIDNEYS	FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS + SMALL GRANULOMA INFILTRATION OF LEUCOCYTES + MACROPHAGE MIGRATION IN PERIVASCULAR AREA	
FATE : Y , KILLED ON SCHEDULE 2) GRADE :	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	
	: NEGATIVE NOT PRESENTED 3) GRADE + , SLIGHT	OF MASS: SMALL AND/OR SINGULAR
• •	<pre></pre>	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1310	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1						STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	ATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1310	>-	240	KIDNEYS		 			
						PIGMENTATION (BILATERAL) INFLITRATION OF LEUCOCYTES	+ + +	
						CALCIFICATION (BILATERAL)	. +	
			UTERUS			PIGMENTATION INFILTRATION OF LEUCOCYTES	+ +	
			PITUITARY GLAND	REDDISH PATCH	+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND	MASS	æ	FIBROADENOMA		
			EYE BALLS		Ü	CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD		<u>a.</u>	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL NUMBER	1) FATE [4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	PATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1211		,	1					
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3	1 / 0	HEARI			FIBROSIS	+	FIBROADENOMA: MAMMARY
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLAND ENDOMETRIAL STROMAL SARCOMA: UTFRIS
			SPLEEN	ENLARGEMENT	+	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG		. J	HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+ +	
			SТОМАСН			INFILTRATION OF LEUCOCYTES EROSION	+ +	
			RECTUM	ADHESION CONSTIPATION	+ +	HEMORRHAGE	+	
			LIVER		NOHLO	FATIY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA CAPSULITIS INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS CHOLANGIOFIBROSIS	+ + + + + + + + + + + + + + + + + + +	
		_	PANCREAS	·		INFILTRATION OF LEUCOCYTES	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

CONTINUED	
11-F4-1311	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1311

ANIMAL NUMBER

1 1 1	1 1 1		. !		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
1) FATE	4) DAYS	ORGAN	GROSS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
3	671	PANCREAS			1 1 1 1 1 1 1			
						ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS				CALCIFICATION (BILATERAL)		
						INFILTRATION OF LEUCOCYTES	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ -	
						PIGMENIALION (BILALEKAL)	+	
		UTERUS	MASS		ပ	ENDOMETRIAL STROMAL SARCOMA PIGMENTATION	+	
		VAGINA			-	АТКОРНУ	++	
		MAMMARY GLAND	MASS		_ ပ	FIBROADENOMA		
		HARDERIAN GLANDS	16			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN				PIGMENTATION	+	
		SPINAL CORD			•••	Pigmentation	+	

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4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

²⁾ GRADE : NEGATIVE NOT PRESENTED

11-F4-1312 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM

1			 		 	STUDY NO. 83004
4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
652	PERITONEUM	MASS	æ	MESENCHYMOMA		
	HEART			FIBROSIS	+	
	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MESENCHYMOMA: PEXIONEUM MESENCHYMOMA: VAGINA
	SPLEEN	ENLARGEMENT	+ + +	EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
	BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ + +	
	NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
	LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+ +	
	LUNG	DISCOLORATION	+			
	LIVER	DISCOLORATION	+ + +	INFILTRATION OF LEUCOCYTES SWELLING OF KUPFFER CELLS CHOLANGIOFIBROSIS	+ + +	
	KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	
	UTERUS			PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED 11-F4-1312 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1 1 1 1 1	1 1 1 1	1 1 1			 		1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1312	3	652	UTERUS			INFILTRATION OF LEUCOCYTES	+	
			VAGINA	MASS	v	MESENCHYMOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	•
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	++	
			SKIN (SUBCUTIS)	MASS NODULE	U +	MESENCHYMOMA LIPOMA		
			BRAIN			PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

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11-F4-1313 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

ALIVACA 12 2.4 ORGAN GROSS PATHOLOGICAL FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS		1			 		1	STUDY NO. 83004
THYMUS	i	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
HYPERPLASIA OF EPITHELIAL BLOOD ABSORPTION EXTRAMEDULLARY HEMATOPOIESIS + HEMOSIDEROSIS INFILTRATION OF LEUCOCYTES + HYPERSECRETION INFILTRATION OF LEUCOCYTES + HYPERSECRETION INFILTRATION OF LEUCOCYTES + KUNILATERAL) INFILTRATION OF LEUCOCYTES + KUNILATERALON OF LEUCOCYTES + HYPERPLASTIC NODULE + HYPERPLASTIC MOBULE + HYPERPLASTIC MOBULE + HYPERPLASTIC MOBULE + MACROPHAGE MIGRATION + HAPPERPLASTIC MAGNOFILES		240	HEART			FIBROSIS INFILTRATION OF LEUCOCYTES	+ +	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL
EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS INFILTRATION OF LEUCOCYTES HYPERSECRETION INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (SANLL GRANULOMA) MACROPHAGE MIGRATION IN PERIVASCULAR AREA			THYMUS				+	GLANDS
EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS INFILTRATION OF LEUCOCYTES HYPERSECRETION INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			LYMPH NODES				+	
INFILTRATION OF LEUCOCYTES HYPERSECRETION INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			(PULM.HILUS) SPLEEN			>-	+ +	
INFILTRATION OF LEUCOCYTES INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+++	
INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			LARYNGOPHARYNX			HYPERSECRETION	+	
NODULE + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES (UNILATERAL) + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			LUNG			INFILTRATION OF LEUCOCYTES	+	
INFILTRATION OF LEUCOCYTES (UNILATERAL) + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
NODULE + HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	NODULE	+	HYPERPLASTIC NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1313	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

ANIMAL 1) 4) FATE DAYS NUMBER	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1313 Y 740	LIVER		FOC FAT	FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS PROLIFERATION OF BILE DUCT	10 CELLS +	
	PANCREAS		INI	INFILTRATION OF LEUCOCYTES	+	
	KIDNEYS		INI CBURI	INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL)	+ + +	
			. PIG			
			THI (B HYA	THICKENING OF BASEMENT MAMBR (BILATERAL) HYALINE DROPLET DEGENERATION	RANE +	
			n) CAL CLO	(BILATERAL) CALCIFICATION (BILATERAL) GLOMERULOSCLEROSIS (UNILATERAL)	, + +	
	UTERUS		PIG	PIGMENTATION	+	
	VAGINA		INF	INFILTRATION OF LEUCOCYTES	+	
	PITUITARY GLAND		. ADE	ADENOMA		
	THYROID GLANDS		НΥР	HYPERPLASIA OF C-CELLS (BIL	(BILATERAL) +	
	ADRENAL GLANDS		РНЕ	PHEOCHROMOCYTOMA (UNILATERAL)	<u></u>	
1) FATE: Y	. KILLED ON SCHEDULE	2) GRADE	NEGATIVE NO	OT PRESENTED	10	OF MASS:
4) DAYS : AF	AFTER START OF TREATMENT			TE		MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS STUDY NO. 83004 2) GRADE HISTOPATHOLOGICAL FINDINGS 1000 PPM LEVEL AND SEX : 2)3) GRADE GROSS PATHOLOGICAL FINDINGS ORGAN 4) DAYS

1

ANIMAL NUMBER

1313

ADRENAL GLANDS 740 FATE

HEMORRHAGE (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) HYPERSECRETION MAMMARY GLAND

+

PIGMENTATION

PIGMENTATION

HARDERIAN GLANDS

BRAIN

SPINAL CORD

11-F4-1313 APPENDIX

CONTINUED

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3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE: Y KILLED ON SCHEDULE

APPENDIX 11-F4-1314

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL	1) FATE	4) DAYS	GAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	 2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1314	>	240	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA	 	MONONUCLEAR CELL LEUKEMIA
			неакт			FIBROSIS INFILTRATION OF LEUCOCYTES	+ +	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+ +	
			LYMPH NODES			BLOOD ABSORPTION	+	
			LYMPH NODES			EXTRAMEDULLARY HEMATOPOIESIS	+	
			SPLEEN	ENLARGEMENT	+ + +	HEMOSIDEROSIS CONGESTION EXTRAMEDULLARY HEMATOPOIESIS PROLIFERATION OF RETICULAR CELLS	+ + + + + +	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			STOMACH		•	INFILTRATION OF LEUCOCYTES	+	
			LIVER	ENLARGEMENT MASS	+ + B	PROLIFERATION OF BILE DUCT WITH FIBROSIS	+	
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CONTINUED	
11-F4-1314	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

ICAL NDINGS GRADE ON OF HEPATIC CELLS + EMATOPOIESIS ++ TION ++ PATHY (BILATERAL) + LEUCOCYTES +	FATE DAYS PATE DAYS PATE DAYS PENDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS GRADE FINDINGS FATTY DEGENERATION OF HEPATIC CELLS + EXTRAMBULLRAY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS + EXTRAMBULLRAY HEMATOPOIESIS FORM NECROSIS AREA HAPPERDALS CHRONICH COLLATERAL) OVARIES CARGINA HYPERPLASIA OF MUCOSAL EPITHELIUM ++ PITUITARY GLAND HYPERPLASIA OF C-CELLS (BILATERAL) + HYPERPLASIA OF C-CELLS (BILATE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1	 			1			STUDY NO. 83004
FATTY DEGENERATION OF HEPATIC CELLS + EXTRABEDULARY HEMATOPDIESIS + SWALL GRAULONA HARMEDOLIAR AREA HARMEDOLIAR AREA HARMEDOLIAR AREA HARMEDOLIAR AREA HARMEDOLIAR AREA HARMEDORIAR CAST (UNILATERAL) HAPPERPLASIA OF C-CELLS (BILATERAL) HAPPE	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA MACROPHAGE MIGRATION IN PERTVASSULAR AREA FOCAL NECROSIVE GLOMERULORA AREA FOLDINITARAL) OVARIES CYST (UNILATERAL) THYROID GLAND PITUITARY GLAND WAGINA WAGINA THYROID GLANDS HYPERPLASIA OF C-CELLS (BILATERAL) CYST THYROID GLANDS WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) CYST THYROID GLANDS WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES CUNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES CHARLES WALLERALDON OF LEUCOCYTES WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES WALLERALDON OF LEUCOCYTES WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES WALLERALDON OF LEUCOCYTES WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF LEUCOCYTES WAGINA HYPERPLASIA OF LEUCOCYTES WAGINA HYPERPLASIA OF LEUCOCYTES WAGINA HYPERPLASIA OF C-CELLS (BILATERAL) WAGINA HYPERPLASIA OF LEUCOCYTES WAGINA WAG	1	1) FATE	4) DAYS	! ! !	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	89	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
KIDNEVS KID	KIDNEYS KIDNERALUCHARY HEMATOPOIESIS SWALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL NECROSIS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) FOLGINERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES FORMENTATION VAGINA PITUITARY GLAND HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF C-CELLS (BILATER	1314	>-	240	LIVER					
CYST (UNILATERAL) CYST (UNILATERAL) D CYST (UNILATERAL) TO FER TOWN OF LEUCOCYTES CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) TYPERPLASIA OF C-CELLS (BILATERAL) CYST HYPERPLASIA OF C-CELLS (BILATERAL) TYPERPLASIA OF C-CELLS (BILATERAL)	CYST (UNILATERAL) CYST (UNILATERAL) HYPERPLASIA OF CCCLLS (BILATERAL) INFILTRATION OF LEUCOCYTES CYST CYST CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIUM CYST (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)							ပ		
MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL NECROSIS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIUM CYST (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL NECROSIS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)						_ 0;	EXIKAMEDULLARY HEMAJUPOJESIS SMALL GRANULOMA	+ + +	
CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) CYST CYST CYST CYST CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES CYST CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES CONILATERAL)	CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) CYST (UNILATERAL) TOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES CYST HYPERPLASIA OF C-CELLS (BILATERAL) TOTAL TOT							1ACROPHAGE MIGRATION	. #	
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CLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) FOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	CYST (UNILATERAL) CYST (UNILATERAL) D CYST (UNILATERAL) TOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) CYST (UNILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				C Y H N C I X			5/11/3/3 5 6 3 C 6 6 7 1 N C 6 H		
PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)) -			GLOMERULONEPHROPATHY (BILATERAL)	+	
CACIFICATION (UNILATERAL) (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES OVST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	CACIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)						<u>.</u> ('IGMENTATION (BILATERAL)	+	1
CYST (UNILATERAL) FOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)						-	ALCIFICALION (UNILATERAL) Netitration of lehoncytes	+ +	
CYST (UNILATERAL) + FOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	CYST (UNILATERAL) + FOLLICULAR CYST (UNILATERAL) INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)						•	(UNILATERAL)	_	
INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	INFILTRATION OF LEUCOCYTES PIGMENTATION HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				OVARIES	CYST (UNILATERAL)		OLLICULAR CYST (UNILATERAL)	+	
D CYST HYPERPLASIA OF MUCOSAL EPITHELIUM HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	HYPERPLASIA OF MUCOSAL EPITHELIUM CYST HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				UTERUS		I		+ +	
D HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	D HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				VAGINA		r	OF MUCOSAL	+ +	
HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	HYPERPLASIA OF C-CELLS (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)				PITUITARY GLAND		S	YST	+	
					THYROID GLANDS		I	YPERPLASIA OF C-CELLS (BILATERAL)	+	
					ADRENAL GLANDS		, H	NFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED 11-F4-1314 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDÙAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1	 	 	1		! ! ! ! !		!	STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS		2)3) HISTOPATHOLOGICAL GRADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1314	>-	240	ADRENAL GLANDS					
						VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	
			SKIN	MASS	Ą	EPIDERMOID CYST	` + + +	
			MAMMARY GLAND			HYPERPLASIA	++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT ++ / MODERATE +++ / SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

11-F4-1315 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	OF MASS	NOT PRESENTED 3) GRADE	NEGATIVE NOT	2) GRADE:	FOUND DEAD	×	1) FATE	1
	+	HYPERPLASIA	_		MAMMARY GLAND			
	+ +	HEMORRHAGE	+ + +	E NL ARGEMENT HEMORRHAGE	PITUITARY GLAND			
	+	(BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL)						
	+	(UNILATERAL) REGENERATIVE RENAL TUBULE	_					
	+	INFILTRATION OF LEUCOCYTES						
	+ +	CALCITICATION (BILATERAL) URINE CAST (BILATERAL)						
	+ +	PIGMENTATION (BILATERAL)			KIDNEYS			
			+ +	ROUGHNESS OF SURFACE DISCOLORATION	LIVER			
	+	CALCIFICATION OF VASCULAR WALL			LUNG			
	+	INFILTRATION OF LEUCOCYTES			NASAL CAVITY			
	+	HEMORRHAGE	+ + +	ENLARGEMENT	SPLEEN			
	+	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS			THYMUS			
	+	FIBROSIS			HEART			
MONONUCLEAR CELL LEUKEMIA		MDNONUCLEAR CELL LEUKEMIA			MULTIPLE ORGANS	719	×	1315
PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	2) GRADE	HISTOPATHOLOGICAL FINDINGS	2)3) GRADE	GROSS PATHOLOGICAL FINDINGS	ORGAN	, 4) E DAYS	L 1) FATE R	ANIMAL NUMBER
STUDY NO. 83004	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1			!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	1	

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		STUDY NO. 83004	0 - 1						OR SINGULAR	/OR SPORADIC OR MULTIPLE
	ш		2) GRADE	+					3) GRADE OF MASS: A , SMALL AND/OR SINGULAR	B , MEDIAL AND. C , LARGE AND/O
PATHOLOGICAL FINDINGS	1000 PPM FEMALE		HISTOPATHOLOGICAL FINDINGS	PIGMENTATION					NOT PRESENTED	AATE RE
INDIVIDUAL PATHO	LEVEL AND SEX :		PATHOLOGICAL 2)3) FINDINGS GRADE	۵.					2) GRADE : NEGATIVE NOT + , SLIGHT	++ / MODE! +++ / SEVE!
			GROSS PATH							START OF TREATMENT
			S ORGAN	BRAIN					, FOUND DEAD	AFTER START OI
		; ; ;	4 DAY	719					 X 	••
		 	MAL 1) FATE IBER	×					1) FATE	4) DAYS

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

ANIMAL 1) 4) FATE DAYS

NUMBER

1315

APPENDIX 11-F4-1315

CONTINUED

11-F4-1316 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

A		1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		; ; ; ;	STUDY NO. 83004	
THYMUS THYMUS HASAL CAVITY CALCIFICATION OF LEUCOCYTES CALCIFICATION OF LUCCCYTES CALCIFICATION CALCIFICATION TO PERTURE ALICE TO PERTURE ALICE TO PERTURE TO PERTUR	1	4) DAYS	ORGAN	- 1	2)3) GRADE	9	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDIN	CAUSE MAJOR FINDINGS
HYPERPLASIA OF EPITHELIAL RETICULUM CELLS NASAL CAVITY LUNG CALCIFICATION OF LEUCOCYTES CALCIFICATION OF LEUCOCYTES CALCIFICATION OF LEUCOCYTES CUNILATERAL) LIVER KIDNEYS KIDNEYS WITHER AREA FATTY DEGENERATION OF HEPATIC CELL CHOLANGIOFISMOSIS CHILATERAL) UTERUS ENLARGEMENT + PIGMENTATION OF LEUCOCYTES CHILATERAL) URINE CAST (BILATERAL) HYPERPLASIA OF CHROMOPHOBE CELLS HARDERIAN GLAND HYPERPLASIA OF CHROMOPHOBE CELLS GRANULATION THY NOTER ON SCHEDULE THY NOTER O		240	HEART		L	IBROSIS	+	POLYP: UTFRUS	
LUNG PAROTID GLANDS CALCIFICATION CALCIFICATION CALCIFICATION CALCIFICATION CALCIFICATION CONTES CONTINGUAL CALCIFICATION CONTES CONTINGUATION CONTINGUAL CALCIFICATION CALCIFICATION CONTINGUAL CALCIFICATION CONTINGUAL CALCIFICATION CALCIFICATION CONTINGUAL CALCIFICATION CALCIFICATION CALCIFICATION CONTINGUAL CALCIFICATION CALCICOCYTES CONTINGUAL CONTINGUAL CALCICOCYTES CONTINGUAL CALCICOCYTES CONTINGUAL CONTING			THYMUS		I	YPERPLASIA OF EPITHELIAL RETICULUM CELLS	+		
LIVER PAROTID GLANDS UNFILTRATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES (UNILATERAL) SMALL GRANULOMA INFRIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CEL CHOLANGIOFIBROSIS PIGMENTATION (BILATERAL) UTERUS ENLARGEMENT + PIGMENTATION POLYP HARDERIAN GLAND GRANULATION (UNILATERAL) (BILATERAL) WHYPERPLASIA OF CHROMOPHOBE CELLS GRANULATION (UNILATERAL) HARDERIAN GLANDS GRANULATION (UNILATERAL) GRANULATION (UNILATERAL) HARDERIAN GLANDS SY KILLED ON SCHEDULE T A SLIGHT T			NASAL CAVITY		ΗŰ	NFILTRATION OF LEUCOCYTES ALCIFICATION	+ +		
LIVER LIVER SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELL CHOLANGIOFIBROSIS KIDNEYS KIDNEYS PIGMENTATION (BILATERAL) UTERUS ENLARGEMENT + PIGMENTATION POLYP HYPERPLASIA OF CHROMOPHOBE CELLS GRANULATION (UNILATERAL) HYPERPLASIA OF CHROMOPHOBE CELLS GRANULATION (UNILATERAL) 1 ' KILLED ON SCHEDULE 2 GRADE : NEGATIVE NOT PRESENTED 3 GRADE + SLIGHT + SLIGHT A ' KILLED ON SCHEDULE 2 GRADE + SLIGHT + CONSENSE B ' A A A A A A A A A A A A A A A A A A			LUNG		ϋ	OF VASCULAR	+		
KIDNEYS KANDERATION KANDER			PAROTID GLANDS		Ī	0.5	+		
PIGMENTATION (BILATERAL) UNFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL) URINE CAST (BILATERAL) URINE CAST (BILATERAL) HYPERPLASIA OF CHROMOPHOBE CELLS GRANULATION (UNILATERAL) TO SHADE IN GATIVE NOT PRESENTED TO SHADE TO			LIVER			HEPATIC			
PITUITARY GLAND PITUITARY GLAND HARDERIAN GLAND S GRADE: NEGATIVE NOT PRESENTED T A CHROMOPHOBE CELLS GRANULATION (UNILATERAL) T A CHROMOPHOBE CELLS GRADE: NEGATIVE NOT PRESENTED T A CHROMOPHOBE CELLS T A CHROMOPHOBE CE			KIDNEYS		P)	VTATION (BILATERAL) FRATION OF LEUCOCYT VTERAL) CAST (BILATERAL)	+ + + +		
HARDERIAN GLANDS HARDERIAN GLANDS GRANULATION (UNILATERAL) 'Y' X KILLED ON SCHEDULE A A CHARDER START OF TREATMENT A CHARDER START OF TREATMENT A CHARDER START OF TREATMENT CONTRACTOR CHARDER CELLS GRADE CHARDENT A CHARDER START OF TREATMENT CONTRACTOR CHARDENT A CHARDER START OF TREATMENT CONTRACTOR CHARDENT CONTRACTOR CHARDENT A CHARDER START OF TREATMENT CONTRACTOR CHARDENT CONTRACTOR CH			UTERUS	ENLARGEMENT	•	GMENTATION	+		
HARDERIAN GLANDS SRANULATION (UNILATERAL) Y / KILLED ON SCHEDULE + / SLIGHT + / SLIGHT B / H / SCHEDE			PITUITARY GLAND		НΥ	ОҒ СНКОМОРНОВЕ	+		
: Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE : Y , KILLED ON SCHEDULE 2) GRADE : A , A , A , A , A , A , A , A , A , A			HARDERIAN GLANDS		GR		+		
1. 3 SEVENE	FATE		LLED ON	2) GRADE :	N E G /	PRESENTED 3)	E OF MASS SMALL AND MEDIAL AN	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE	

3) GRADE OF MASS:
A . SMALL AND/OR .SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1316	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

ANIMAL 1) 4) HUMBER	1) ATE (4) 0AYS	ANIMAL 1) 4) ORGAN GROSS PATHO FATE DAYS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	LOGICAL 2)3) HISTOPATHOLOGICAL 2)3 PROBABLE CAUSE NDINGS GRADE FINDINGS GRADE PATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1316	, - ≻-	072	Y 740 BRAIN		PI	PIGMENTATION	+	
			SPINAL CORD		PI	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE .

2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

4) DAYS : AFTER START OF TREATMENT

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

	1 1 1			; ; ; ; ;			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1317 Y	741	HEART		u.	FIBROSIS	+	POLYP: UTERUS
		THYMUS		Δ.	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		ш	BLOOD ABSORPTION	+	
		SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX		I	INFILTRATION OF LEUCOCYTES	+	
		LUNG		00	CALCIFICATION OF VASCULAR WALL OSSEOUS TISSUE	+ +	
•		LIVER		Σ ασπμπ	MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA ANGIECTASIA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC	+ ++++	
		KIDNEYS		H G.	INFILTRATION OF LEUCOCYTES (UNILATERAL) PIGMENTATION (BILATERAL)	+ +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1	1	1						STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS		GROS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1317		741	Y 741 KIDNEYS			CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	; ; ; ; ; ; ; ; ; ;	
			UTERUS		c . c.	POLYP PIGMENTATION	+	
			ADRENAL GLANDS		I	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN		Δ.	PIGMENTATION	+	
			SPINAL CORD		а.	PIGMENTATION	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 1) FATE: Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

11-F4-1318 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

> NUMBER ANIMAL

1318

. !	!	0.00							
STUDY NO. 83004	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	ENDOMETRIAL STROMAL SARCOMA: UTERUS C-CELL ADENOMA: THYROID							
	2) GRADE	÷	+ + + +	+	+ + + +	++	LLS +++++	+ +	+ +
	HISTOPATHOLOGICAL FINDINGS	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	INFILTRATION OF LEUCOCYTES	CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES ADENOMATOSIS HISTIOCYTOSIS	SEROSITIS	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS EXTRAMEDULLARY HEMATOPOIESIS	SEROSITIS ATROPHY OF PANCREATIC ACINUS	PIGMENTATION (BILATERAL)
	2)3) GRADE	+	+				+		•
	GROSS PATHOLOGICAL FINDINGS	DISCOLORATION	ENLARGEMENT		·		YELLOWISH CHANGE		·
	0 R G A N	HEART THYMUS	LYMPH NODES (THYMIC) SPLEEN	NASAL CAVITY	LUNG	RECTUM	LIVER	PANCREAS	KIDNEYS
	4) DAYS	632							
	1) ATE	 3							

4) DAYS : AFIER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

+ SLIGHT ++ MODERATE +++ SEVERE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

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CONTINUED	ICOLOGICA T
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11-F4-1318	INHALATION TOXI
APPENDIX	C AND CARCINOGENIC INHALATION TOXICOLOGICAL OF METHANOL IN FISCHER RAT
	AND
	CHRONIC

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INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM

STUDY NO. 83004	2) PROBABLE CAUSE GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS										OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
! ! !	GRA	! ! + + + ! !			+		+ + +	+ +	+	+	E OF M SMALL MEDIA LARGE
	HISTOPATHOLOGICAL FINDINGS	INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	ENDOMETRIAL STROMAL SARCOMA, PRIMARY	ENDOMETRIAL STROMAL SARCOMA. METASTASIS	HYPERPLASIA OF CHROMOPHOBE CELLS	C-CELL ADENOMA (UNILATERAL)	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) EXTRAMEDULLARY HEMATOPOIESIS (UNILATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (BILATERAL)	INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERSECRETION (UNILATERAL)	PIGMENTATION	PIGMENTATION	TIVE NOT PRESENTED 3) GRADE SLIGHT A ' A ' SEVERE B '
1	2)3) GRADE		v	Ą		•		,			EGA.
	GROSS PATHOLOGICAL FINDINGS		60			•					2) GRADE : N + + + + + + + + + + + + + + + + + +
1	GRC		MASS	MASS				W			11.S
	ORGAN	KIDNEYS	UTERUS	VAGINA	PITUITARY GLAND	THYROID GLANDS	ADRENAL GLANDS	HARDERIAN GLANDS	BRAIN	SPINAL CORD	KILLED IN EXTREMIS ER START OF TREATMENT
! ! !	4) DAYS	632									. W :
! ! !	1) FATE	3									FATE
1	ANIMAL NUMBER	1318									1)

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

1

APPENDIX 11-F4-1319

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

CONTANT | TOTOLOGIC CONTANT

1000 PPM

LEVEL AND SEX :

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			! ! ! ! ! !			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAU F DEATH OR MAHOLOGICAL FIN
1319 W	735	MULTIPLE ORGANS	DISCOLORATION	+ + +	Ε		MYELOCYTIC LEUKEMIA
		HEART			FIBROSIS	+	: MULTIPLE ORGANS ADENOMA: PITUITARY GLAND
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+ +	
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN	ROUGHNESS OF SURFACE ATROPHY	+ + + +	HEMOSIDEROSIS ATROPHY	+ + + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	+	
·		LIVER	ROUGHNESS OF SURFACE ATROPHY YELLOWISH CHANGE	+ + +	FATTY DEGENERATION OF HEPATIC CELLS CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES EXTRAMEDULLARY HEMATOPOIESIS	+ + + + + +	
		PANCREAS			ENLARGEMENT OF LANGERHANS' ISLAND ATROPHY OF PANCREATIC ACINUS	+ + +	
		KIDNEYS			PIGMENTATION (BILATERAL)	+ +	

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

CONTINUED	
11-F4-1319	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM

STUDY NO. 83004

L)	ANIMAL 1) 4) NUMBER FATE DAYS	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) TARY GLAND ENLARGEMENT ++ ADENOMA HEMORRHAGE + HYPERPLASIA OF C-CELLS (UNILATERAL) PIGMENTATION PIGMENTATION	1319		735						
INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) TARY GLAND ENLARGEMENT ++ ADENOMA HEMORRHAGE + HYPERPLASIA OF C-CELLS (UNILATERAL) PIGMENTATION							CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+,	
S TARY GLAND ENLARGEMENT ++ ADENOMA HEMORRHAGE + ID GLANDS PIGMENTATION PIGMENTATION PIGMENTATION							INFILTRATION OF LEUCOCYTES	+	
TARY GLAND ENLARGEMENT ++ ADENOMA HEMORRHAGE + HYPERPLASIA OF C-CELLS (UNILATERAL) PIGMENTATION							CALCIFICATION (BILATERAL)	+	
TARY GLAND ENLARGEMENT ++ ADENOMA HEMORRHAGE + HYPERPLASIA OF C-CELLS (UNILATERAL) PIGMENTATION				UTERUS		_	PIGMENTATION	+	
ID GLANDS HYPERPLASIA OF C-CELLS (UNILATERAL) PIGMENTATION				PITUITARY GLAND	E NL ARGEMENT HEMORRHAGE		ADENOMA		
				THYROID GLANDS		_	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
				BRAIN		-	PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED 1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

+ / SLIGHT ++ / MODERATE +++ / SEVERE

11-F4-1320 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	! ! ! !			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	AL 2)3) S GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	۱ م.
1320 Y	741	HEART		I	INFILTRATION OF LEUCOCYTES	+	GNIFICANT LESION
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		6	BLOOD ABSORPTION	+	
		SPLEEN		ж ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY		Н	INFLAMMATION	++	
		LARYNGOPHARYNX		I	INFILTRATION OF LEUCOCYTES	+	
		LIVER	NODULE	+	INFILTRATION OF LEUCOCYTES HYPERPLASTIC NODULE SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA CHOLANGIOFIBROSIS	+ + + + +	
		PANCREAS		I	INFILTRATION OF LEUCOCYTES	+	
		KIDNEYS		H	INFILTRATION OF LEUCOCYTES (UNILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + + + + + + + + + + + + + + + + + + +	
		OVARIES			LEUCOCYTES	+	
1) FATE 4) DAYS	Y KI AFTER	KILLED ON SCHEDULE ER START OF TREATMENT	(2	GRADE : NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED 3)	RADE OF MA A SMALL B MEDIAL C LARGE	SS: AND/OR SINGULAR AND/OR SPORADIC AND/OR MULTIPLE

CONTINUED	
11-F4-1320	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER'RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1320	>-	741	OVARIES		 	(BILATERAL)		
			UTERUS		6.0	PIGMENTATION DILATATION OF DUCT	+ +	
			PITUITARY GLAND		Ξ	HYPERPLASIA OF CHROMOPHOBE CELLS	+ + +	
			SKIN		I	INFILTRATION OF LEUCOCYTES	+	
			BRAIN		۵	PIGMENTATION	+	
			SPINAL CORD		۵.	PIGMENTATION	+	
						,		
				·	•			
1 1 1 1 1 1	i ! !	! ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1			
1	FATE	` ≻ 	S NO O	E 2) GRADE:	NEG.	PRESENTED 3) GRA	E OF MASS SMALL AND	OR SINGULAR
) (7	DAYS	: AFTER	R START OF TREATMENT		++ / MODERATE +++ / SEVERE	RATE B.		MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

11-F4-1321 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	[]]]			! 1 1 1 1 2 1 5		; ; ; ; ; ; ; ;	STUDY	NO. 83004
ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2 GRADE) OF PATH	PROBABLE CAUSE DEATH OR MAJOR OLOGICAL FINDINGS
1321 Y	741	HEART		L.	FIBROSIS	+	CAR	
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+		GLAND
		SPLEEN		±ω	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + S		
		BONE MARROW		<u>с</u>	PROLIFERATION OF RETICULAR	CELLS +		
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+		
	•	רתאפ		0	OSSEOUS TISSUE	+		
		LIVER		Ω E Σ	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CE MACROPHAGE MIGRATION IN PERIVASCULAR AREA	CELLS +		·
		KIDNEYS		5 1 3 2	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL) PIGMENTATION (BILATERAL)	TERAL) +		
		OVARIES		ī	INFILTRATION OF LEUCOCYTES (BILATERAL)	+		
		UTERUS		G .	PIGMENTATION	+		
1) FATE	, ,	KILLED ON SCHEDULE	E 2) GRADE	NEGATIVE NOT	NOT PRESENTED 3)	GRADE	OF MASS : SMALL AND/OR SINGULAR	LAR
4) DAYS	: AFTER	ER START OF TREATMENT		+++ SEVERE	7. E 3. E		MEDIAL AND/OK SPOKADIC LARGE AND/OR MULTIPLE	PLE PLE

CONTINUED	
11-F4-1321	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1		1 1 1 1 1	1		1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ANIMAL 1) 4) ORGAN GROSS PATHOL FATE DAYS NUMBER	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE) PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1321	>-	741	Y 741 VAGINA		I	INFILTRATION OF LEUCOCYTES	+	
			CLITORAL GLAND	NODULE	+	A D E N O C A R C I N O M A		
			ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)		
			BRAIN		a.	PIGMENTATION	+	
			SPINAL CORD		Œ.	PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1322

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

	1 1 1	! ! ! !			:		1	STUDY NO. 83004
ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL	2)	PROBABLE CAUSE
NUMBER	!	; ; ; ;) 1 2 1 1 1	00 0 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GRADE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1322	>-	741	MULTIPLE ORGANS			LEU	1 1 1 1 1 1	FIBROMA: SKIN (SIBCITES)
			HEART			FIBROSIS	+ +	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL L'EUXEMIA
			THYMUS		•	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	· +	: MULTIPLE ORGANS
			LYMPH NODES	÷	•	BLOOD ABSORPTION	+	
			SPLEEN	ENLARGEMENT	++			
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+ +	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			SUBMAXILLARY GLANDS			FIBROSIS (UNILATERAL)	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	ROUGHNESS OF SURFACE	+ + +	SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS PROLIFERATION OF BILE DUCT WITH FIBROSIS	+ + +	

3) GRADE OF MASS:	A . SMALL AND/OR SINGILLAR	B / MFDIAI AND/OR SPORDAT	C / LARGE AND/OR MII TIPLE	
2) GRADE : NEGATIVE NOT PRESENTED	+ > SLIGHT	++ / MODERATE	+++ / SEVERE	
1) FAIE : Y / KILLED ON SCHEDULE .			4) DAYS : AFTER START OF TREATMENT	

APPENDIX 11-F4-1322 CONTINUED

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	: : :			 		1	STUDY NO. 83004
ANIMAL 1) NUMBER	E DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL
1322 Y	741	LIVER		_	FOCAL ATROPHY OF HEPATIC CELLS	+	
		KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	. + + + +	
		OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	
		VAGINA		I	INFILTRATION OF LEUCOCYTES	+	
		PITUITARY GLAND	ENLARGEMENT	+	ADENOMA		
		THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	HYPERPLASIA OF C-CELLS (BILATERAL)	+	
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) EXTRAMEDULLARY HEMATOPOIESIS (UNILATERAL)	+ + +	
		SKIN (SUBCUTIS)	MASS	80	FIBROMA		
		9	S		FILTRATION OF LEUCOCYTES	+	
1) FA 2) DA 4) DA	FATE: Y DAYS: AF	Y , KILLED ON SCHEDUL AFTER START OF TREATM	E 2) GRADE E	** NEGATIVE NOT +	PRESENTED 3) GRADE A 1 B 1 C C 1 C C C C C C C C C C C C C C	OF MASS: SMALL AND/OR MEDIAL AND/OR LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED	
11-F4-1322	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND, SEX : 1000 PPM

! ! ! ! !	: ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 1 1 1	1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
ANIMAL 1) 4)	11	(7)	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	į	
NUMBER	т. Н.	DAYS		FINDINGS	GRADE	LINDINGS	2) GRADE	PROBABLE CAUSE Of DEATH OR MAJOR
		!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			!		- 1	PATHOLOGICAL FINDINGS
1322	> -	γ 741	HARDERIAN GLANDS			(BILATERAL)		
			BRAIN		Q.	PIGMENTATION	+	
			SPINAL CORD		Δ.	PIGMENTATION		

1) FATE : Y / KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ SLIGHT
++ MODERATE
+++ SEVERE

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE 3) GRADE OF MASS:

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	# 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ANIMAL 1) 4) KATE DAYS NUMBER	S	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1323 Y 741	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	! ! ! ! ! +	NO SIGNIFICANT LESION
	LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION	+	
	SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
	NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
	LUNG			OSSEOUS TISSUE CALCIFICATION OF VASCULAR WALL	+ +	
	LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA PROLIFERATION OF BILE DUCT FATTY DEGENERATION OF HEPATIC CELLS	+ + + +	
	KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	
	UTERUS			PIGMENTATION	+	
	EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	RETINAL ATROPHY (UNILATERAL)	+ +	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE 4) DAYS : AFTER START OF TREATMENT

1) FATE: Y , KILLED ON SCHEDULE

CONTINUED	
11-F4-1323	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ANIMAL 1) 4) ORGAN GROSS PATHOL FATE DAYS FIN	1 00 1	2)3) GRADE	GICAL 2)3) HISTOPATHOLOGICAL 1NGS GRADE FINDINGS GRADE	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1323	>	741	Y 741 FYF BAILS					
1	•	1 ;			UΞ	CATARACT (UNILATERAL) HEMOSIDEROSIS (UNILATERAL)	+ +	
			BRAIN		d.	PIGMENTATION		
			SPINAL CORD		α.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1324

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

83004
0 0
STUDY

! ! ! ! !				1 1 1 1 1		1 1 1 1 1 1 1	3100. 8300¢
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1324 Y	741	MULTIPLE ORGANS		Σ	MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND
		HEART		u.	FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
		THYMUS		=	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES		В	BLOOD ABSORPTION	+	
			ENLARGEMENT	± + +	HEMOSIDEROSIS	+	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
		TRACHEA		ĭ	INFILTRATION OF LEUCOCYTES	+	
		LUNG		ΞÚ	HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+ ÷	
		LIVER		S F	SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS	+++++	
		KIDNEYS		1 1502	PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	++++	
		UTERUS		P.	PIGMENTATION	+	
1) FATE 4) DAYS	. Y .	: Y , KILLED ON SCHEDULE : AFTER START OF TREATMENT	2) GRADE	: NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED 3)	ıw	OF~MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
						1	

CONTINUED	TOXICOLOGICAL STUDY RAT
11-F4-1324	INHALATION IN FISCHER
APPENDIX	CARCINOGENIC INHAL OF METHANOL IN B
	AND
	CHRONIC AND

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

	 	; ; ; ;					1	STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) \TE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1324	≻	741	PITUITARY GLAND	ENL ARGEMENT HEMORRHAGE	 	ADENOMA		
			THYROID GLANDS		_	HYPERPLASIA OF C-CELLS (UNILATERAL) +		
			ADRENAL GLANDS		_	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS		H	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN		0. E	PIGMENTATION MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
		•	SPINAL CORD		۵	PIGMENTATION	+	

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE 2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE 4) DAYS : AFTER START OF TREATMENT 1) FATE : Y , KILLED ON SCHEDULE

11-F4-1325 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) NUMBER FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1325 W	683	HEART			FIBROSIS	+	ADENOMA: MAMMARY GLAND
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	RHABDOMIOSARCOMA : MUSCLE (Q. FEMORIS)
		LYMPH NODES	ENLARGEMENT	+	RHABDOMYOSARCOMA, METASTASIS		
		(ILIAC) SPLEEN	ENLARGEMENT	++	EXTRAMEDULLARY HEMATOPOIESIS	+ + +	•
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	.+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		LUNG	NODULE	++	RHABDOMYOSARCOMA, METASTASIS		
		LIVER	YELLOWISH CHANGE	+	EXTRAMEDULLARY HEMATOPOIESIS GRANULAR DEGENERATION	+ + + +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) HYPERPLASIA OF RENAL TUBULES (BILATERAL)	+ + + +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND		•	HYPERPLASIA OF CHROMOPHOBE CELLS	+	
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
1) FATE		W , KILLED IN EXTREMIS TO THE OUT OF THE OUT OUT OF THE OUT OF THE OUT OUT OF THE OUT OUT OUT OUT OUT OF THE OUT	2) GRADE	NEGATIVE NOT + SLIGHT ++ MODERATE +++ SEVERE	PRESENTED 3) GRA A A	DE OF MASS SMALL AN MEDIAL A	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

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CONTINUED 11-F4-1325 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1	1 1 1	1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1			STUDY NO. 83004
ANIMAL 1) FATE	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL	2)3)	HISTOPATHOLOGICAL	2)	PROBABLE CAUSE
NUMBER	1	 			1000	FINDINGS	GRADE	OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1325	Β	683	ADRENAL GLANDS	ENLARGEMENT (INTI ATERA)	! ! ! ! ! !	HYPERPLASIA OF GLOMERULOSA CELLS	 	
						(BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (RILATEDAL)	+++++++++++++++++++++++++++++++++++++++	
						CLCS SILATERAL) (BILATERAL)	+	
			MUSCLE (Q. FEMORIS)	MASS	ပ	RHABDOMYOSARCOMA, PRIMARY		
		•	MAMMARY GLAND	MASS	U	ADENOMA HYPERPLASIA	+ +	
			EYE BALLS			CALCIFICATION, SCLERA (BILATERAL)	+	
			SPINAL CORD		-	PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

11-F4-1326 APPENDIX

CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	; ; ; ;			1			STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1326 Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOCARCINOMA: CLITORAL
		HEART			FIBROSIS	+	—
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN	ENLARGEMENT	+ + +	EXTRAMEDULLARY HEMATOPOIESIS	+	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		rung			CALCIFICATION OF VASCULAR WALL OSSEOUS TISSUE	+ +	
		STOMACH			DILATATION OF GASTRIC FAVEOLAE	+	
		LIVER	ROUGHNESS OF SURFACE	+ + +	FATTY DEGENERATION OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS SMALL GRANULOMA FOCAL NECROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+ + + + + + + S	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
1) FATE 4) DAYS	E : Y . K]	KILLED ON SCHEDULE ER START OF TREATMENT	2) GRADE ENT	: NEGATIVE + , SLIGH ++ , MODER +++ , SEVER	ATIVE NOT PRESENTED SLIGHT SEVERE C SEVERE	1 111	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

7.3

A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:

CONTINUED	
11-F4-1326	
APPENDIX	

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

UTERUS CLITORAL GLAND MASS PIUITARY GLAND ENLARGEMENT THYROID GLANDS HARDERIAN GLANDS BRAIN DI	GROSS PATHOLOGICAL 2)3) FINDINGS GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
MASS A ENLARGEMENT + + + + + + + + + + + + + + + + + + +		URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) INFILTRATION OF LEUCOCYTES	. + + + +
MASS ENLARGEÑENT + + + + + + + + + + + + + + + + + + +		PIGMENTATION	+
ENLARGEMENT +, HEMORRHAGE +		A D E N O C A R C I N O M A	
		ADENOMA	
		HYPERPLASIA OF C-CELLS (UNILATERAL)	+ ^
		INFILTRATION OF LEUCOCYTES (BILATERAL)	+
		DILATATION OF CEREBRAL VENTRICLE	+
SPINAL CORD PI		PIGMENTATION	+

11-F4-1327 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

> NUMBER ANIMAL

1327

1 1 1 1	1			1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STUDY NO. 83004
1) FATE	4) DAYS	O R G A N	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
>	741	HEART			FIBROSIS	++	AL
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GLAND POLYP: UTERUS
		LYMPH NODES			BLOOD ABSORPTION	+	
		CPULM.HILUS) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		TRACHEA			INFILTRATION OF LEUCOCYTES	+	
		LUNG			HISTIOCYTOSIS	+	
		PAROTID GLANDS			REGENERATIVE CHANGE (BILATERAL)	+	
		LIVER			SMALL GRANULOMA PROLIFERATION OF BILE DUCT FOCAL ATROPHY OF HEPATIC CELLS	+ + +	
		PANCREAS			INFILTRATION OF LEUCOCYTES ATROPHY OF PANCREATIC ACINUS	+ +	
		KIDNEYS		•	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

2) GRADE : NEGATIVE NOT PRESENTED	+ SLIGHT	++ , MODERATE	+++ , SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

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CONTINUED
11-F4-1327
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

	1 1 1 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SIUDY NO. 83004
ANIMAL 1 FA1 NUMBER	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	0 G I F I N	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1327	Y 741	KIDNEYS					
					CHRONIC PROGRESSIVE	+	
					CALCIFICATION (BILATERAL) CALCIFICATION (BILATERAL)	. + +	
		OVARIES			CYST (UNILATERAL)	+ +	
		UTERUS	ENLARGEMENT	+	DILATATION OF DUCT POLYP	+	
		CLITORAL GLAND	MASS	В	ADENOCARCINOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL) +	+	
		ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		MAMMARY GLAND	MASS	8	DILATATION OF GLAND	+ + +	
		BRAIN			PIGMENTATION	+	
		SPINAL CORD		_	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

11-F4-1328 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

	1 1 1			; ; ; ; ; ;			STUDY NO. 83004
ANIMAL 1) NUMBER NUMBER	4) DAYS	0 R G A N	GROSS PATHOLOGICAL FINDINGS	, 2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1328 W	736	HEART		u.	FIBROSIS	+ +	ADENOMA: PITUITARY GLAND
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FIBROADENOMA: MAMMARY GLAND
		SPLEEN		x	HEMOSIDEROSIS	+ +	
		NASAL CAVITY		I	INFLAMMATION	++	
		FUNG		S	CONGESTION	+++	
		PAROTID GLANDS		П	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER		пконг	XTRAMEDULLARY HEMATOPOIE ATTY DEGENERATION OF HEF MALL GRANULOMA NFILTRATION OF LEUCOCYTE OCAL ATROPHY OF HEPATIC	SSIS + + + + + + + + + + + + + + + + + +	
		KIDNEYS		O EH O	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	ATERAL) ++ + ++	
		OVARIES		н	INCREASE OF INTERSTITIAL CELLS (BILATERAL)	ELLS ++	
		UTERUS		Δ.	PIGMENTATION	+	
1) FATE 4) DAYS	E : W . KI S : AFTER	KILLED IN EXTREMIS ER START OF TREATMENT	2) GRADE	NEGATIVE N + SLIGHT ++ MODERA +++ SEVERE	NOT PRESENTED AT RATE	3) GRADE OF MASS: A SMALL AND/OR B MEDIAL AND/OR C LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

1							
1) FATE	1) 4) FATE DAYS	GAN	SS PATHO	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
3	736	VAGINA		1 1 1 1 1 1 1	АТRОРНҮ	; ; ; ; ; ; ; ; ;	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		PITUITARY GLAND	MASS	Ą	ADENOMA		
		ADRENAL GLANDS	REDDISH CHANGE (UNILATERAL)	+	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) ANGIECTASIA (UNILATERAL)	+ + + + +	
		MAMMARY GLAND	MASS	ပ	FIBROADENOMA		
		BRAIN			HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE PIGMENTATION MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + + +	
		SPINAL CORD			PIGMENTATION	+	

NUMBER

1328

ANIMAL

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE: NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

3) GRADE OF MASS:
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

1329 X 718 HEART HEART HEMOSIDEROSIS H	AN IMAL NUMBER	1) FATE	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
CONGESTION TARY GLAND RYS CONGESTION CALCIFICATION OF HEPATIC CELLS + CALCIFICATION OF LEUCOCYTES + CHRONIC PROGRESSIVE CHRONIC	1329	×	718	HEART			FIBROSIS	+ +	FIBROADENOMA: MAMMARY
TARY GLAND ENLARGEMENT ++ HEMORRHAGE RY GLAND MASS CONGESTION FATTY DEGENERATION OF HEPATIC CELLS CALCIFICATION OF HEPATIC CELLS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CELLS CHRONA TARY GLAND THEMORRHAGE				SPLEEN			HEMOSIDEROSIS	++	GLAND HEMORRHAGE: BRAIN
FATTY DEGENERATION OF HEPATIC CELLS CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) TARY GLAND ENLARGEMENT ++ HEMORRHAGE ++ MIGRATION OF HEMOSIDERIN-LADEN CELLS CHROND MASS C FIBROADENOMA + HEMORRHAGE				LUNG			CONGESTION	++++	
TARY GLAND ENLARGEMENT ++ HEMORRHAGE RY GLAND MASS C CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) ++ HEMORRHAGE ++ MEMORRHAGE ++ MEMORRHAGE CELLS C FIBROADENOMA + HEMORRHAGE				LIVER			FATTY DEGENERATION OF HEPATIC CELLS		
TARY GLAND ENLARGEMENT ++ HEMORRHAGE HEMORRHAGE ++ MIGRATION OF HEMOSIDERIN-LADEN CELLS CELLS C FIBROADENOMA IMPRESSION + HEMORRHAGE				KIDNEYS			CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ + .	
RY GLAND MASS C FIBROADENOMA IMPRESSION + HEMORRHAGE				PITUITARY GLAND	ENLARGEMENT HEMORRHAGE		HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + +	
IMPRESSION + HEMORRHAGE				MAMMARY GLAND	MASS		FIBROADENOMA		
				BRAIN	IMPRESSION	+	HEMORRHAGE	+ +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE

APPENDIX 11-F4-1330

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 					! ! ! !	STUDY NO. 83004
ANIMAL 1) NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1330 Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MUCIIPLE ORGANS ADENOMA: PITUITARY GLAND
		SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		רחאפ	HEMORRHAGE	++			
		LIVER			ANGIECTASIA FOCAL ATROPHY OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS	+ + + + +	
		PANCREAS			INFILTRATION OF LEUCOCYTES	+	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+. +++	
		OVARIES	ENLARGEMENT				
1) FATE	>	/ KILLED ON SCHEDULE	JLE 2) GRADE	** NEGATIVE NOT +	NOT PRESENTED 3) GRADE SHATE B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OF MA SMALL MEDIAL	: /OR SINGULAR UD/OR SPORADIC
4) DAYS	••	AFTER START OF TREATMENT			SEVERE	LARGE AND	AND/OR MULTIPLE

CONTINUED
11-F4-1330
APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1			: : : : : :			STUDY NO.
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	.2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	BABLE CAUSE ATH OR MAJOR GICAL FINDINGS
1330	>-	741	OVARIES	(BILATERAL)				
			UTERUS		<u>.</u>	PIGMENTATION	+	
			VAGINA		I	INFILTRATION OF LEUCOCYTES		
			PITUITARY GLAND		AI	ADENOMA		
			HARDERIAN GLANDS	<u>.</u>	ii	INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN .		P.	PIGMENTATION	+	
			SPINAL CORD		P.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

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11-F4-1331 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1331 Y	741				FIBROSIS	+	ITUITARY GLAND
		THYMUS		-	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES			BLOOD ABSORPTION	+	
		(PULM.HILUS) LYMPH NODES			ANGIECTASIA	+	
		(MESENT.) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFLAMMATION	+ +	
		LUNG			INFILTRATION OF LEUCOCYTES	+	
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	+ +	
		LIVER		o, a 2, a	SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS	+ + + + + + 	

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

1) FATE: Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

CONTINUED 11-F4-1331 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

		1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) NUMBER	4) ORGAN YS	! ! !	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	THOLOGICAL FINDIN	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1331 Y 741	1 LIVER					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
					PROLIFERATION OF BILE DUCT	+	
	PANCREAS				ATROPHY OF PANCREATIC ACINUS	++	
	KIDNEYS				CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ +	
					CALCIFICATION (BILATERAL)	+	
	OVARIES				INCREASE OF INTERSTITIAL CELLS (BILATERAL)	+	
	UTERUS				PIGMENTATION INFILTRATION OF LEUCOCYTES	+ +	
	PITUITARY GLAND	GLAND	E NL AR GEMEN T H EMORRHAGE	+ + + +	АДЕИОМА		
	THYROID GLANDS	ANDS	.		HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
	ADRENAL GLANDS	ANDS		-	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
	MAMMARY GLAND	AND		<u></u>	HYPERPLASIA	+	
	HARDERIAN GLANDS	GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
	BRAIN		IMPRESSION	+	DILATATION OF CEREBRAL VENTRICLE	+ +	

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

CONTINUED
11-F4-1331
APPENDIX

CHRONIC AND CARCINGGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

1000 PPM

FEMALE LEVEL AND SEX : STUDY NO. 83004

$\forall \vdash \vdash$									OR SINGULAR	MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
2) GRADE	+	.							3) GRADE OF MASS : A SMALL AND	B , MEDIAL AND C , LARGE AND/
HISTOPATHOLOGICAL FINDINGS	PIGMENTATION	PIGMENTATION							NOT PRESENTED	'RATE 'RE
2)3) GRADE								-	: NEGATIVE NOT + , SLIGHT	++ , MODERA +++ , SEVERE
GROSS PATHOLOGICAL FINDINGS									2) GRADE	
ORGAN GRC	BRAIN	SPINAL CORD			٠				/ KILLED ON SCHEDULE	AFTER START OF TREATMENT
4) DAYS	741							1 1	` > 	••
1) FATE	>-		•					1 1	FATE	4) DAYS
ANIMAL	1331							1 1 1	1)	7 >

11-F4-1332 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1332	>-	741	HEART		_	FIBROSIS	+	ISLET-CELL ADENOMA
			THYMUS		_	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	. FANCKEAS ADENOMA: PITUITARY GLAND
			LYMPH NODES		_	BLOOD ABSORPTION	+	
			(PULM.HILUS) SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	+ +	
			PAROTID GLANDS	·	_	REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ + +	
			PANCREAS	NODULE	+	ISLET-CELL ADENOMA		
			KIDNEYS			INFILTRATION OF LEUCOCYTES . (BILATERAL) . CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ ' +	

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1) FATE : Y , KILLED ON SCHEDULE

²⁾ GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

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CHRONIC AND CARCINGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1	1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			::		STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	1	N A	GROSS PATHO	2)3) GRADE	HISTOPATHOLOGICAL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1332	>	741	KIDNEYS					
						PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
			UTERUS		-	PIGMENTATION	+	
			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
			MAMMARY GLAND			HYPERPLASIA	+	
			HARDERIAN GLANDS		. 7	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN		u.	PIGMENTATION	+	
			SPINAL CORD		ú.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE ++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F4-1333 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

ANIMAL FA NUMBER	1) 4) FATE DAYS	4) ORGAN YS	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1333	W 736	S MULTIPLE ORGANS	DISCOLORATION	+			PHEOCHROMOCYTOMA: ADRENAL
		PERITONEUM	MASS	v	SARCOMA		GLANDS PAPILLARY ADENOMA: LUNG
		HEART			FIBROSIS	+	SARCOMA: PEKITONEUM
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES			BLOOD ABSORPTION	+	
		SPLEEN SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + +	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG	CYST	+	CALCIFICATION OF VASCULAR WALL PAPILLARY ADENOMA PHEOCHROMOCYTOMA, METASTASIS	+	
		LIVER	DISCOLORATION	+	EXTRAMEDULLARY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS	+ + + + S	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			PIGMENTATION (BILATERAL)	+	
1) F	FATE: W	W , KILLED IN EXTREMIS	2) GRADE	NEGATIVE NOT + SLIGHT ++ MODERATE	TIVE NOT PRESENTED 3) GRADE SLIGHT A S S MODERATE B V P	S OF MASS SMALL AND MEDIAL AND	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
4) DAYS	••	AFIER START OF TREATMENT		+++ SEV	SEVERE C .	LARGE AN	D/OR MULTIPLE

APPENDIX 11-F4-1333 CONTINUED CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT INDIVIDUAL PATHOLOGICAL FINDINGS			
APPENDIX 11-F4-1333 CHRONIC AND CARCINOGENIC INHALATION TOXIC OF METHANOL IN FISCHER RAT INDIVIDUAL PATHOLOGICAL FINDIN	CONTINUED	OLOGICAL STUDY	GS
APPENDIX CHRONIC AND CARCINOGENIC OF METHANOL INDIVIDUAL PAT	11-F4-1333	INHALATION TOXIC IN FISCHER RAT	HOLOGICAL FINDIN
CHRONIC AND	APPENDIX	CARCINOGENIC OF METHANOL	INDIVIDUAL PAT
CHRONIC		AND	
		CHRONIC	

; ; ; ; ;				STUDY NO. 83004		STUDY NO. 83004
4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	2)3) HISTOPATHOLOGICAL RADE FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAIOR
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PATH		PATHOLOGICAL FINDINGS

KIDNEYS

736

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1333

FATE

NUMBER ANIMAL

1000 PPM

LEVEL AND SEX :

		INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (RTIGATEDAL)	, + -
		REGENERATIVE RENAL TUBULE (BILATERAL) HRINF CAST (BT1 ATERAL)	+ +
OVARIES		INCREASE OF INTERSTITIAL CELLS (UNILATERAL)	+ . +
UTERUS		PIGMENTATION DILATATION OF DUCT	+ +
PITUITARY GLAND	HEMORRHAGE +	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +
		HYPERTROPHIC CHANGE	+
ADRENAL GLANDS	MASS	PHEOCHROMOCYTOMA (UNILATERAL), PRIMARY	
BRAIN		PIGMENTATION	+

3) GRADE DE MASS :	A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE
3	
2) GRADE : NEGATIVE NOT PRESENTED	+ > SLIGHT ++ > MODERATE +++ > SEVERE

PIGMENTATION

SPINAL CORD

4) DAYS : AFIER START OF TREATMENT

1) FATE : W . KILLED IN EXTREMIS

11-F4-1334 APPENDIX

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	1			1		1 1 1 1 1 1 1		STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	_	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1334 Y	242	THYMUS		±	ITH		; ; ; ; ; ; ; ;	NO SIGNIFICANT LESION
		SPLEEN		π ω	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	ESIS	+ + +	
		BONE MARROW		Δ.	PROLIFERATION OF RETICULAR	AR CELLS	+	
		NASAL CAVITY		H	INFILTRATION OF LEUCOCYTES	ES	+ +	
		LARYNGOPHARYNX		HH	INFILTRATION OF LEUCOCYTES HYPERSECRETION	ES	+ +	
		TRACHEA		I	INFILTRATION OF LEUCOCYTES	S	+	
		LUNG		нтош	INFILTRATION OF LEUCOCYTES HISTIOCYTOSIS CALCIFICATION OF VASCULAR EMPHYSEMA	ES R WALL	+ +.+ +	
		LIVER		2 F F F F F F F F F F F F F F F F F F F	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT FATTY DEGENERATION OF HEPATIC MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES	ELLS TIC CELLS	+++++	
		PANCREAS		I	INFILTRATION OF LEUCOCYTES		+	
		KIDNEYS	• ·		RONIC PROGRESSIV		+	
1) FATE :	Y X KI : AFTER	LLED	2) GRADE :-	** NEGATIVE NOT + * SLIGHT ++ * MODERATE +++ * SEVERE	NOT PRESENTED 11 ATE RESENTED 12 ATE RESENTED 14 ATE RESENTED 15 ATE	3) GRADE OF A SMALL B MEDI	OF MASS: SMALL AND/OR MEDIAL AND/OP	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
					ı		יסו אייסי	יטא הטרוזירה

CONTINUED	
11-F4-1334	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1 1 1 1	1					1	STUDY NO. 83004
1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	GICAL	2) GRADE	ᄔᄑ
> -	742	KIDNEYS			GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL)	+++	
		UTERUS		п	INFILTRATION OF LEUCOCYTES PIGMENTATION	+ + +	
		VAGINA		I	INFILTRATION OF LEUCOCYTES	+	
		THYROID GLANDS		II	HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF FOLLICULAR EPITHELIAL CELLS (UNILATERAL)	+ +	
		PARATHYROID GLANDS	•	H	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		ADRENAL GLANDS		ЧΗ	ANGIECTASIA (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	
		EYE BALLS	HEMORRHAGE (UNILATERAL)	++++	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+ + + + + +	
		HARDERIAN GLANDS		. ·	INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ .	
		BRAIN		ā.	PIGMENTATION	+	
		SPINAL CORD		م م	PIGMENTATION	+	
1) FATE 4) DAYS	. Y . K	KILLED ON SCHEDULE ER START OF TREATMENT	2) GRADE :	NEGATIVE NOT SLIGHT H NODERATE H SEVERE		OF MASS: SMALL AND/OR MEDIAL AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
						1	מו הסריזורר

APPENDIX 11-F4-1335

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CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

	 			: : : : : :			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1335 W	728	HEART		u.	FIBROSIS	+	ADENOMA: PITUITARY GLAND
		THYMUS		Ξ	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ISLET-CELL ADENOMA : PANCREAS
		SPLEEN		ΞW	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + S	
		BONE MARROW		E	MIGRATION OF HEMOSIDERIN-LADEN CELLS	DEN +	
		NASAL CAVITY		17	INFILTRATION OF LEUCOCYTES CALCIFICATION	+ +	
		LARYNGOPHARYNX		II	INFILTRATION OF LEUCOCYTES	+	
		TRACHEA		ī	INFILTRATION OF LEUCOCYTES	+	
		Fung		/ 0	CALCIFICATION OF VASCULAR WALL	ALL +	
		LIVER		S F F F F F F F F F F F F F F F F F F F	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC	LLS +++	
		PANCREAS		I S	ISLET-CELL ADENOMA HEMORRHAGE	+++	
		KIDNEYS			PROGRESSIVE LONEPHROPATHY	+	
1) FATE 4) DAYS	! ! •• ••	W X KILLED IN EXTREMIS AFTER START OF TREATMENT	2) GRADE	: NEGATIVE NOT +	PRESENTED 3	GRADE A A B C	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

CONTINUED 11-F4-1335 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 			STUDY NO. 83004
ANIMAL 1) FATE NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	THOLOGI FIN	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1335	728	S > H N O I X				1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
					PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ +	
		OVARIES			INCREASE OF INTERSTITIAL CELLS (BILATERAL)	+ +	
		UTERUS			PIGMENTATION	+	
		PITUITARY GLAND	MASS HEMORRHAGE	4 +	ADENOMA		
		MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		BRAIN	IMPRESSION	+ + +	DILATATION OF CEREBRAL VENTRICLE PIGMENTATION	+ + +	
		SPINAL CORD			PIGMENTATION	+ 1	

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

APPENDIX 11-F4-1336

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

	!			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) NUMBER	6 DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	0L0 F	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1336 Y	272	HEART		ű.	SIS	! ! ! ! ! ! ! !	ADENOMA: PITUITARY GLAND
		THYMUS		I	HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	C-CELL ADENOMA: THYROID GLANDS POLYP: UTERUS
		LYMPH NODES (PULM.HILUS)		8	BLOOD ABSORPTION	+	
		SPLEEN		ж ш	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
		NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+ +	
		LARYNGOPHARYNX		I	INFILTRATION OF LEUCOCYTES	+	
		PAROTID GLANDS	•	æ	REGENERATIVE CHANGE (UNILATERAL)	+	
		LIVER	NODULE	+	CHOLANGIOFIBROSIS FOCAL NECROSIS FOCAL ATROPHY OF HEPATIC CELLS HYPERPLASTIC NODULE SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS	+ + + + +	
•		KIDNEYS		1001	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ +	

	3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
	2) GRADE : NEGATIVE NOT PRESENTED	+ , SLIGHT ++ , MODERATE +++ , SEVERE
1 1 1	1) FATE : Y , KILLED ON SCHEDULE	4) DAYS : AFTER START OF TREATMENT

CONTINUED	
11-F4-1336	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

> ANIMAL NUMBER

1336

1 1 1 1 1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					STUDY NO PROPERTY.
. 1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
>-	272	KIDNEYS				 	TATOCHOGICAL TINDINGS
				0 11	CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+ +	
		UTERUS		ш ш	POLYP PIGMENTATION	. +	
		PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	ADENOMA		
		THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)		
		ADRENAL GLANDS		>	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
		MAMMARY GLAND		H	INFILTRATION OF LEUCOCYTES	+	
		EYE BALLS		U	CALCIFICATION, SCLERA (UNILATERAL)	+	
		HARDERIAN GLANDS		9	GRANULATION (UNILATERAL)	+	
		BRAIN		۵.	PIGMENTATION	+	
	•	SPINAL CORD		α.	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

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11-F4-1337 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM

	1) 4) FATE DAYS	ORGAN	GROSS PATHOLOGICAL . FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
NUMBER	1 1 1						PATHOLOGICAL FINDINGS
1337	769 M	HEART			FIBROSIS	+	
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PIIUIIARY GLAND
		SPLEEN			HEMOSIDEROSIS	+ +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
		רחאפ		 · ·	HISTIOCYTOSIS INFILTRATION OF LEUCOCYTES	+ +	
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		LIVER		7, E & A E	SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES FOCAL NECROSIS	+ + + + + + S -	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ +++	
		UTERUS	NODULE		NFILTRATION OF LEUCOCYTES	+	
1)	!	/ KILLED IN EXTREMI	S 2 GRADE	EG/	ATIVE NOT PRESENTED 3) GRADE SLIGHT B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A B	E OF MASS SMALL AN MEDIAL A	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC
7	DAYS : AF	AFTER START OF TREATMENT	ENT	+++ SEVE		LARGE AN	D/OR MULTIPLE

CONTINUED 11-F4-1337 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM

1	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	1			; ; ; ;			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL	CRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1337	3	769	UTERUS		; t t t t t t		: ! ! !	
						POLYP HYPERPLASIA OF ENDOMETRIAL EPITHELIUM	+ +	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	ENL ARGEMENT HEMORRHAGE	+ + + + +	ADENOMA		
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL)	+ +	
			MAMMARY GLAND		,	HYPERPLASIA	+ + +	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	RETINAL ATROPHY (UNILATERAL)	+ +	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN	IMPRESSION ADHESION	+ +	HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE PIGMENTATION	+++	
			SPINAL CORD		•	PIGMENTATION	+	

4) DAYS : AFTER START OF TREATMENT

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1338

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMA

1 1 1 1 1 1	1 1 1 1 1	1			1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	ტ ⊢-	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1338	>-	272	MULTIPLE ORGANS		 	MONONUCLEAR CELL LEUKEMIA	 	MONONUCLEAR CELL LEUKEMIA
			SPLEEN	ENLARGEMENT	+			: MULTIPLE ORGANS ADENOMA: PITUITARY GLAND
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	` + + + +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ + + +	A D E N O M A C O N G E S T I O N	‡	
			ADRENAL GLANDS		-	CONGESTION (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

²⁾ GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

11-F4-1339 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

PROBABLE CAL	ANIMAL 1)		ORGAN	GROSS PATHOLOGICAL				31001 8004
Y 742 LYMPH NODES	1	TE DAYS		FI	1	HISIOPATHOL	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
HEROSIDEROSIS LIVER LIVER NODULE + HYPERLASTIC MODULE + HYPERLASTIC MOLICATERAL) + HYPERLASTIC MOLICATERAL - HYPER	339	272	LYMPH NODES (SUBMAXI.)			OF PLASMA	; ; ; ; ; ; ; ;	ADRE
LIVER NODULE + HYPERPLASTIC NODULE			SPLE EN				, + + +	GLANDS POLYP: VAGINA ADFNOMA: PITHITABY CLANDS
CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIUM (BILATERAL) CALCIFICATION (UNILATERAL) PITUITARY GLAND HEMORRHAGE THYROID GLANDS THYROID GLANDS FATE : Y , KILLED ON SCHEDULE CUNILATERAL) FATE : Y , KILLED ON SCHEDULE CALCIFICATION (UNILATERAL) CALCIFICATION OF DUCT CALCIFICATION OF DUCT POLYP POLYP POLYP POLYP POLYP POLYP POLYP PHEOCHROMOCYTOMA (UNILATERAL) CANGE CONST. CONILATERAL) CONILATERAL) CONST. CONILATERAL) CONILATERAL C			LIVER	NODULE	+	PLASTIC NODULE GRANULOMA ATROPHY OF HEPATIC	+ + +	
PIGMENTATION (BILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIUM (BILATERAL) (BLATERAL) VAGINA PITUITARY GLAND HEMORRHAGE + ADENOMA THYROID GLANDS ADRENAL GLANDS EYE BALLS EYE BALLS GRAYISH CHANGE (UNILATERAL) FATE: Y KILLED ON SCHEDULE 2) GRADE + CATARATE CUNILATERAL) FATE: Y KILLED ON SCHEDULE 2) GRADE + CATARATE CONDENT CON			KIDNEYS			PROGRESSIVE JLONFPHROPATHY		
UTERUS VAGINA PILATATION OF DUCT POLYP PITUITARY GLAND HEMORRHAGE + ADENOMA THYROID GLANDS ADRENAL GLANDS REDDISH CHANGE (UNILATERAL) EYE BALLS GRAYISH CHANGE (UNILATERAL) FATE: Y , KILLED ON SCHEDULE DAYS: AFTER START OF TREATMENT (THYROID GLANDS (UNILATERAL) (UNIL						PIGMENTATION (BILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIU (BILATERAL)		
VAGINA PITUITARY GLAND HEMORRHAGE + ADENOMA THYROID GLANDS ADRENAL GLANDS ADROCHROMOCYTOMA (UNILATERAL) CVST (UNILATERAL) EYE BALLS GRAYISH CHANGE CUNILATERAL) FATE: Y . KILLED ON SCHEDULE DAYS: AFTER START OF TREATMENT CAGRAFIER THYROID GLAND C-CELLS (BILATERAL) CVST (UNILATERAL) THYROID GLAND CONTILATERAL) THYROID GLAND CONTILATERAL THYROID GL							+	
PITUITARY GLAND HEMORRHAGE + ADENOMA THYROID GLANDS ADRENAL GLANDS ENLARGEMENT (UNILATERAL) REDDISH CHANGE (UNILATERAL) EYE BALLS GRAYISH CHANGE (UNILATERAL) FATE: Y KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE (CONILATERAL) HYPERPLASIA OF C-CELLS (BILATERAL) + CYST (UNILATERAL) + CATARACT (UNILATERAL) + CATARACT (UNILATERAL) + A SLIGHT DAYS: AFTER START OF TREATMENT + SEVERE			UTERUS			0 F	+	
THYROID GLANDS ADRENAL GLANDS ADRENAL GLANDS REDDISH CHANGE (UNILATERAL) EYE BALLS EYE BALLS EYE BALLS EYE BALLS CATARRACT (UNILATERAL) FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED +			VAGINA			POLYP		
ADRENAL GLANDS ADRENAL GLANDS ENLARGEMENT (UNILATERAL) (UNILATERAL) EYE BALLS (UNILATERAL) EYE BALLS (UNILATERAL) EYE BALLS (UNILATERAL) EYE BALLS (UNILATERAL) FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED +			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
ADRENAL GLANDS ENLARGEMENT (UNILATERAL) REDDISH CHANGE (UNILATERAL) EYE BALLS (UNILATERAL) EYE BALLS (UNILATERAL) FATE: Y , KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED + , SLIGHT + , MODERATE C YST (UNILATERAL) + + + CATARACT (UNILATERAL)			THYROID GLANDS			OF C-CELLS		
EYE BALLS GRAYISH CHANGE +++ CATARACT (UNILATERAL) (UNILATERAL) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 4 , A , H+ , MODERATE B , A , C , C , C , C , C , C , C , C , C			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL) REDDISH CHANGE (UNILATERAL)	+ +	PHEOCHROMOCYTOMA (UNILATERAL) CYST (UNILATERAL)	+ + +	
FATE: Y, KILLED ON SCHEDULE 2) GRADE: NEGATIVE NOT PRESENTED 3) GRADE 4 , SLIGHT A , H , MODERATE B , C , C , C , C , C , C , C , C , C ,			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+ + +	CATARACT (UNILATERAL)	+ + +	
DAYS : AFTER START OF TREATMENT +++ \ SEVERE C \ C \ C \	1) FAT	, ,	1 NO	2) 6	: NEGATIV	NOT PRESENTED 3)	E OF MASS	
	4) DAY	••		MENT		₹ ₪ ∪		/OR SINGULAR)/OR SPORADIC /OR MULTIPLE

A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

CONTINUED 11-F4-1339 APPENDIX CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

+	IGMENTATION			NTAGR		
+ + +	ETINAL ATROPHY (UNILATERAL)	æ				
				EYE BALLS	742	>-
1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	!		!	1
GRADE	FINDINGS	GRADE	FINDINGS		DAYS	FATE
	HISTOPATHOLOGICAL	2)3)	GROSS PATHOLOGICAL	ORGAN	1) 4)	1
	V	HISTOPATHOLOGICAL FINDINGS GRA	GRADE FINDINGS GRA GRADE FINDINGS GRA GRA GRA GRA GRA GRA GRA G	OGICAL 2)3) HISTOPATHOLOGICAL DINGS GRADE FINDINGS	10	ORGAN GROSS PATHOLOG FINDI EYE BALLS RRAIN

NUMBER ANIMAL

1339

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE: NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

11-F4-1340 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

								STUDY NO. 83004
ANIMAL 1 ANIMAE FAT		4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1340	>	742	HEART			FIBROSIS	+	PHEOCHROMOCYTOMA: ADRENAL
			SPLEEN			HEMOSIDEROSIS	+ +	
			LARYNGOPHARYNX			INFLAMMATION CYSTIC DILATATION OF GLAND CALCIFICATION OF VASCULAR WALL	+ + +	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+ +	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ +	
	,		OVARIES			ATROPHY (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + +	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL)		
					•			

11-F4-1341 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1	! !	1						STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1341	>-	272	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			SPLEEN	ENLARGEMENT	+	CONGESTION HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + + + +	
			LARYNGOPHARYNX			INFLAMMATION CYSTIC DILATATION OF GLAND	+ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	ENLARGEMENT	+	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ + +	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	
			PITUITARY GLAND	HEMORRHAGE	+			
			MAMMARY GLAND			DILATATION OF GLAND	+	

3) GRADE OF MASS:	A , SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C , LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ > SLIGHT	++ / MODERATE	+++ SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

4) DAYS : AFTER START OF TREATMENT

A . SMALL AND/OR SINGULAR B . MEDIAL AND/OR SPORADIC C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : X , FOUND DEAD

APPENDIX 11-F4-1342

. CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

		! ! ! ! !			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) FATE DAYS NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	1 1 1 1				1			PATHOLOGICAL FINDINGS
1342	×	658	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I I I I I I I I I I I I I I I I I I I
			SPLEEN	ENLARGEMENT	+ +			: MULTIPLE ORGANS
			LIVER	ROUGHNESS OF SURFACE	+			
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	- +	
			PITUITARY GLAND	HEMORRHAGE	+			

11-F4-1343 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE LEVEL AND SEX : 1000 PPM

	1 1 1 1 1						STUDY NO. 83004
ANIMAL 1) 4)	7	ORGAN	GROSS PATHOLOGICAL	() ()		 	
FATE NUMBER	DAYS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FIN	GRADE	FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
							THE PROPERTY OF THE PROPERTY O
1343 Y	272	SPLEEN			HEMOSIDEROSIS	4 4	
						 -	ADENUMA: PITUITARY GLAND
		NASAL CAVITY			INFLAMMATION	+	
		LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+ +	
						٠	
		KIDNEYS		~ '	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	. +	
					JGMENTATION (BILATERAL)	+++	
		OVARIES		1	ATROPHY (BILATERAL)	+ +	
		PITUITARY GLAND	ENL ARGEMENT HEMORRHAGE	+ + + + + +	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		BRAIN	IMPRESSION	+	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED + SLIGHT + MODERATE +++ SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F4-1344 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE 1000 PPM LEVEL AND SEX :

	1 1 1 1	; ; ; ;			 		1 1 1 1 1	STUDY NO. 83004
ANIMAL	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1344	3	718	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ISLET-CELL ADENOMA
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA
			SPLEEN	ENLARGEMENT	+ + +		•	GRANULOSA-THECA CELL
			NASAL CAVITY	-		INFLAMMATION	++	UTERUS
		•	LIVER	DISCOLORATION	+	PIGMENTATION PROLIFERATION OF BILE DUCT	+ +	ADENOMA: PIIUIIAKY GLAND
			PANCREAS			ISLET-CELL ADENOMA		
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + +	
			OVARIES	ENLARGEMENT (UNILATERAL)	+ +	GRANULOSA-THECA CELL TUMOR (UNILATERAL) ATROPHY (UNILATERAL)	+ +	
			UTERUS			FIBROMA		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	ADENOMA		
			BRAIN	IMPRESSION	+ .			

4) DAYS : AFTER START OF TREATMENT 1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1345

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

FEMALE LEVEL AND SEX : 1000 PPM

1	 	! ! ! !			1		; ; ; ;	STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1345	>-	243	HEART			FIBROSIS	+	POLYP: UTERUS
			LYMPH NODES			ANGIECTASIA	+	ADENOMA: MAMMARY GLAND
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+ + +	
			KIDNEYS	IMPRESSION (UNILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ + + +	
			UTERUS	ENLARGEMENT	+	POLYP NECROSIS	+ +	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	A	ADENOMA		

3) GRADE OF MASS:	A . SMALL AND/OR SINGULAR	B , MEDIAL AND/OR SPORADIC	C , LARGE AND/OR MULTIPLE
2) GRADE : NEGATIVE NOT PRESENTED	+ SLIGHT	++ \ MODERATE	+++ > SEVERE
1) FATE : Y , KILLED ON SCHEDULE			4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS:
A \circ SMALL AND/OR SINGULAR
B \circ MEDIAL AND/OR SPORADIC
C \circ LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1346

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	-			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			STUDY NO. 83004
ANIMAL 1) 4) NUMBER	1) TE D	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	LOGI	 2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1346	<i>۲</i>	243	HEART	r.			! ! ! ! ! ! !	00011011111111111111111111111111111111
			SPLEEN		I	HEMOSIDEROSIS	+++	COCHOIN LITUITARI GLAND
			LIVER		N F O	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS CHOLANGIOFIBROSIS	, + + + +	
			KIDNEYS		e o	PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + +	
		-	PITUITARY GLAND	HEMORRHAGE	+ A	ADENOMA		
		-	THYROID GLANDS		H	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		-	MAMMARY GLAND		Ξ	HYPERPLASIA	+	

1) FATE : Y . KILLED ON SCHEDULE 2) GRADE : NGGATILE NOT PRESENTE + . STIGHT

4) DAYS : AFTER START OF TREATMENT

11-F4-1347 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE LEVEL AND SEX : 1000 PPM STUDY NO. 83004

ANIMAL 1) FATE NUMBER	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1347 Y	743	HEART			FIBROSIS	+	MALIGNANT LYMPHOMA
		LYMPH NODES			ANGIECTASIA	+	. 57 L
		SPLEEN	ENLARGEMENT	+ +	MALIGNANT LYMPHOMA, PRIMARY HEMOSIDEROSIS	++	
		BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+ +	
		LARYNGOPHARYNX			CYSTIC DILATATION OF GLAND	+	
		LIVER	ROUGHNESS OF SURFACE	· + +	MALIGNANT LYMPHOMA, METASTASIS SMALL GRANULOMA	÷	
		KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+ ‡	
		UTERUS			CYSTIC ENDOMETRIAL HYPERPLASIA	+	
		ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	AL ++	
		BONE (FEMUR)		٠	OSTEOSCLEROSIS	+	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		BRAIN			PIGMENTATION	+	
1) FATE	>	/ KILLED ON SCHEDULE	2) GRADE	EGA	NOT PRESENTED 3) G	I W	SOLOR SINGULAR
4) DAYS	: AFTER	ER START OF TREATMENT		++ , MOD +++ , SEV	MODERATE B SEVERE C	/ MEDIAL A	MEDIAL AND/OK SPORADIC LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

1) FATE : Y , KILLED ON SCHEDULE

APPENDIX 11-F4-1348

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !				! ! ! !			STUDY NO. 83004
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1348	>-	743	SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			NASAL CAVITÝ			INFILTRATION OF LEUCOCYTES	+	C-CELL ADENOMA: THYROID GLANDS
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER		٠	FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ ++	
			UTERUS	ENLARGEMENT	+	DILATATION OF DUCT	+	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+ +	C-CELL ADENOMA (UNILATERAL)		
			ADRENAL GLANDS	•		PHEOCHROMOCYTOMA (UNILATERAL) CONGESTION (UNILATERAL)	+	
			SKIN			FOLLICULITIS	+ +	
			MAMMARY GLAND			HYPERPLASIA	+	

11-F4-1349 APPENDIX CHRÖNIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

1 1 1 1 1	1	1 1			1			۵
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1349	> -	243	HEART			FIBROSIS	i i i i i i i	GLIOSIS: BRAIN
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			LUNG			CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS	+ +	
			PAROTID GLANDS			ATROPHY OF ACINAR CELLS (UNILATERAL	RAL +	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	† † ₊	
			OVARIES			ATROPHY (UNILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ +	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			THYROID GLANDS		<u></u>	HYPERPLASIA OF C-CELLS (UNILATERAL)	AL) +	
			ADRENAL GLANDS		. 0	HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+. +	
			EYE BALLS		J	CATARACT (UNILATERAL)	+	
1)	FATE	: Y / KI : AFTER	KILLED ON SCHEDULE R START OF TREATMENT	E 2) GRADE ENT	. NEGATIVE NOT + , SLIGHT ++ , MODERATE +++ , SEVERE	PRESENTED 3) GRA A B C C C	DE OF MASS SMALL AN MEDIAL A	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
			-					

CONTINUED	
11-F4-1349	
APPENDIX	

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

E CAUSE OR MAJOR L FINDINGS		
PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS		: OF MASS : SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE
2) GRADE		3) GRADE OF MASS A , SMALL AND B , MEDIAL AN C , LARGE AND
HISTOPATHOLOGICAL FINDINGS	GL I O S I S	NOT PRESENTED HT RATE RE
2)3) GRADE		: NEGATIVE NOT F + , SLIGHT ++ , MODERATE +++ , SEVERE
GROSS PATHOLOGICAL FINDINGS		2) GRADE
ORGAN GRC	BRAIN	Y , KILLED ON SCHEDULE AFTER START OF TREATMENT
4) DAYS	74.3 B1	≻
1) FATE D	→	 FATE: DAYS:
ANIMAL NUMBER	1349	1)

11-F4-1350 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX : STUDY NO. 83004

ANIMAL 1) NUMBER	1) 4) TE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1350 Y	. 743	HEART		·	FIBROSIS THICKENING OF ARTERIAL WALL	+ +	NO SIGNIFICANT LESION
		LYMPH NODES			BLOOD ABSORPTION	+	
		(PULM:HILUS) LYMPH NODES			ANGIECTASIA	+	
		SPLEEN SPLEEN			HEMOSIDEROSIS CONGESTION	+ + +	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL	+	
		LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA HYPERPLASTIC NODULE	+ + + + +	
		PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
		KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +	
		PITUITARY GLAND	REDDISH CHANGE	+	CONGESTION	+	
		HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
1) FA (7) DA (7) DA	FATE: Y,	Y , KILLED ON SCHEDULE AFTER START OF TREATMENT	2) GRADE	NEGATIVE N + SLIGHT ++ MODERA ++ SEVERE	NOT PRESENTED 3) GRAD IT A ' ATE B ' C'	E OF MASS: SMALL AND/OR MEDIAL AND/OR LARGE AND/OR	OF MASS: SMALL AND/OR SINGULAR MEDIAL AND/OR SPORADIC LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1351

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

LEVEL AND SEX : 1000 PPM FEMALE

	1 1 1	1			1			STUDY NO, 83004
ANIMAL 1) 4) NUMBER	1) ATE D	4) AYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	STOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICA! EINDINGS
1351	٠ ۲	243	HEART			FIBROSIS	+	NO SIGNIFICANT LESTON
			SPLEEN		- W	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ + +	
			LIVER	NODULE	+	HYPERPLASTIC NODULE FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+ + +	
			PANCREAS		A	ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS		O TO	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ + +	
			PITUITARY GLAND		Ξ	HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			THYROID GLANDS		Ξ	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	

4 > SLIGHT
+ + MODERA
4) DAYS : AFTER START OF TREATMENT
+++ SEVERE

1) FATE : Y , KILLED ON SCHEDULE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

3) GRADE OF MASS:
A . SMALL AND/OR SINGULAR
B . MEDIAL AND/OR SPORADIC
C . LARGE AND/OR MULTIPLE

11-F4-1352 APPENDIX

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

FEMALE 1000 PPM LEVEL AND SEX :

: : : : : :	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			. STUDY NO. 83004
ANIMAL NUMBER	1) 4) FATE DAYS	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	. 2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR
1352	>-	243	HEART				! ! ! !	PATHOLOGICAL FINDINGS
					_	TIBRUSIS	+	LEIOMYOMA: UTERUS
			S P L EE R		Ξ ω	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +	CHORDOMA: VERTEBRA
			NASAL CAVITY		I	INFILTRATION OF LEUCOCYTES	+	
			רחאפ		υ±	CHORDOMA, METASTASIS HISTIOCYTOSIS	. +	
			LIVER		<u>ш</u> <u>ш</u>	FATTY DEGENERATION OF HEPATIC CELLS + FOCAL ATROPHY OF HEPATIC CFIS	+ +	
					S	SMALL GRANULOMA PROLIFERATION OF BILE DUCT	+ + +	
			KIDNEYS		473	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	
			UTERUS	MASS	C LE	LEIOMYOMA		
			VERTEBRA		Ö	CHORDOMA, PRIMARY		

	PRESEN			
	2) GRAD	+ > SLIGHT	++ / MODERATE	+++ SEVERE
	1) FATE: Y , KILLED ON SCHEDULE		: : : : : : : : : : : : : : : : : : :	TO DAIS . ATTER STAKE OF TREATMENT
1 1 1 1 1	ILLED O		} { {	N H N
1 1 1 1 1 1 1	× ×		- L	۲ ا ا
1	••		•	•
	FATE		2	2
	1			ì